

U.S. Department of the Interior  
U.S. Geological Survey

# Water Resources Data Missouri Water Year 2002

By H.S. Hauck and C.D. Nagel

Water-Data Report MO-02-1



Prepared in cooperation with the State of Missouri  
and with other agencies.



CALENDAR FOR WATER YEAR 2002

2001

OCTOBER							NOVEMBER							DECEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3							1
7	8	9	10	11	12	13	4	5	6	7	8	9	10	2	3	4	5	6	7	8
14	15	16	17	18	19	20	11	12	13	14	15	16	17	9	10	11	12	13	14	15
21	22	23	24	25	26	27	18	19	20	21	22	23	24	16	17	18	19	20	21	22
28	29	30	31				25	26	27	28	29	30		23	24	25	26	27	28	29
														30	31					

2002

JANUARY							FEBRUARY							MARCH						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
		1	2	3	4	5						1	2						1	2
6	7	8	9	10	11	12	3	4	5	6	7	8	9	3	4	5	6	7	8	9
13	14	15	16	17	18	19	10	11	12	13	14	15	16	10	11	12	13	14	15	16
20	21	22	23	24	25	26	17	18	19	20	21	22	23	17	18	19	20	21	22	23
27	28	29	30	31			24	25	26	27	28			24	25	26	27	28	29	30
														31						
APRIL							MAY							JUNE						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6				1	2	3	4							1
7	8	9	10	11	12	13	5	6	7	8	9	10	11	2	3	4	5	6	7	8
14	15	16	17	18	19	20	12	13	14	15	16	17	18	9	10	11	12	13	14	15
21	22	23	24	25	26	27	19	20	21	22	23	24	25	16	17	18	19	20	21	22
28	29	30					26	27	28	29	30	31		23	24	25	26	27	28	29
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JULY							AUGUST							SEPTEMBER						
S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S
	1	2	3	4	5	6					1	2	3	1	2	3	4	5	6	7
7	8	9	10	11	12	13	4	5	6	7	8	9	10	8	9	10	11	12	13	14
14	15	16	17	18	19	20	11	12	13	14	15	16	17	15	16	17	18	19	20	21
21	22	23	24	25	26	27	18	19	20	21	22	23	24	22	23	24	25	26	27	28
28	29	30	31				25	26	27	28	29	30	31	29	30					

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U.S. DEPARTMENT OF THE INTERIOR

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U.S. GEOLOGICAL SURVEY

Charles G. Groat, Director

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District Chief, Water Resources Division  
U.S. Geological Survey  
1400 Independence Road - Mail Stop 100  
Rolla, Missouri 65401



## PREFACE

This hydrologic-data report for Missouri is one of a series of annual reports that document hydrologic data collected from the U.S. Geological Survey's surface- and ground-water data collection networks in each State, Puerto Rico, and the Trust Territories. These records of surface water, surface-water quality, and ground-water levels provide the hydrologic information needed by local, State, and Federal agencies and the private sector for developing and managing our Nation's land and water resources.

This report is the culmination of a concerted effort by personnel of the U.S. Geological Survey who collected, compiled, analyzed, verified, and organized the data and who typed, edited, and assembled the report. In addition to the authors, who had primary responsibility for ensuring that the information is accurate, complete, and adheres to U.S. Geological Survey policy and established guidelines, the following individuals contributed significantly to the collection, processing, and tabulation of the data:

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This report was prepared in cooperation with the State of Missouri and with other agencies under the general supervision of Loyd A. Waite, Hydrologic Surveillance Section Chief and Michael E. Slifer, District Chief, Missouri.

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## CONTENTS

	Page
Preface .....	iii
List of surface-water stations, in downstream order, for which records are published in this volume .....	vii
List of discontinued surface-water discharge or stage-only stations .....	xii
List of discontinued surface-water-quality stations .....	xv
Introduction .....	1
Cooperation .....	1
Water Use--2000 .....	2
Missouri Water-Use Fact Sheet .....	2
Physiography .....	4
Summary of Hydrologic Conditions .....	4
Surface Water--Streamflow .....	4
Water Quality--Streamflow .....	7
Special Networks and Programs .....	8
Explanation of the Records .....	9
Station Identification Numbers .....	9
Downstream Order and Station Number .....	9
Numbering System for Wells and Miscellaneous Sites .....	10
Records of Stage and Water Discharge .....	10
Data Collection and Computation .....	10
Data Presentation .....	11
Station manuscript .....	11
Data table of daily mean values .....	12
Statistics of monthly mean data .....	13
Summary statistics .....	13
Identifying Estimated Daily Discharge .....	14
Accuracy of Data and Computed Results .....	14
Other Data Available .....	14
Records of Surface-Water Quality .....	15
Classification of Records .....	15
Arrangement of Records .....	15
On-site Measurements and Sample Collection .....	15
Water Temperature .....	15
Sediment .....	16
Laboratory Measurements .....	16
Quality Assurance of Water-Quality Data .....	16
Data Presentation .....	16
Remark Codes .....	17
Dissolved Trace-Element Concentrations .....	17
Water Quality-Control Data .....	17
Access to USGS Water Data .....	18
Definition of Terms .....	19
Publications on Techniques of Water-Resources Investigations .....	33
Surface-water station records .....	46
Partial-record surface-water stations .....	529
Analyses of samples collected at water-quality partial-record stations .....	536
Index .....	539

ILLUSTRATIONS

	Page
Figure 1. Graph showing source and use values and percentages for major offstream water-use categories in Missouri during 2000 .....	3
2. Map showing major drainage basins, physiographic areas, and areas of mean discharge during the 2002 water year .....	5
3. Graphs showing comparison of 2002 water-year mean discharge to long-term mean discharge.....	6
4. Diagram showing system for numbering miscellaneous sites (latitude and longitude) .....	9
5. Map showing location of surface-water stations.....	37
6. Map showing location of surface-water-quality stations.....	38
7. Map showing location of Metropolitan St. Louis Sewer District stations.....	39
8. Map showing location of stations in the Northwest Prairie.....	40
9. Map showing location of stations in the Northeast Prairie.....	41
10. Map showing location of stations in the West Central Plains.....	42
11. Map showing location of stations in the West Ozarks.....	43
12. Map showing location of stations in the East Ozarks.....	44
13. Map showing location of stations in the Bootheel.....	45
14. Map showing location of partial-record stations (surface and quality water).....	528

TABLES

	Page
Table 1. Comparisons of peak discharge for the 2002 water year with those for period of record for selected stations .....	4
2. Comparisons of the 2002 water year 7-day low flows to 7-day, 2-year low flows and minimum flows for the period of record at selected stations..	7
3. Range of dissolved-solids concentrations in selected streams during the 2002 water year.....	7
4. Minimum and maximum daily mean suspended-sediment concentrations at two selected stations during the 2002 water year.....	7

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,  
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

[Letter after station name designates type of data: (d) discharge, (c) chemical,  
(m) microbiological, (t) water temperature, (s) sediment, and (e) elevation and/or contents]

	Station Number	Page
UPPER MISSISSIPPI RIVER BASIN		
Mississippi River:		
FOX RIVER BASIN		
Fox River at Wayland (d,c,m) .....	05495000	46
WYACONDA RIVER BASIN		
Wyaconda River above Canton (d) .....	05496000	49
FABIUS RIVER BASIN		
North Fabius River at Monticello (d) .....	05497000	50
Middle Fabius River near Monticello (d) .....	05498000	51
Troublesome Creek near Ewing (c,m) .....	05499900	52
South Fabius River near Taylor (d,c,m) .....	05500000	54
NORTH RIVER BASIN		
North River at Palmyra (d) .....	05501000	59
BEAR CREEK BASIN		
Bear Creek at Hannibal (d) .....	05502000	60
SALT RIVER BASIN		
North Fork Salt River at Hagers Grove (d) .....	05502300	61
North Fork Salt River near Shelbyna (d) .....	05502500	62
Crooked Creek near Paris (d) .....	05503800	63
South Fork Salt River above Santa Fe (d) .....	05504800	64
Long Branch near Santa Fe (d) .....	05506100	65
Middle Fork Salt River near Holliday (d) .....	05506350	66
Elk Fork Salt River near Madison (d) .....	05506800	67
Lick Creek at Perry (d) .....	05507600	68
Mark Twain Lake near Center (e) .....	05507700	69
Salt River near Center (d) .....	05507800	71
Salt River near New London (d) .....	05508000	72
Spencer Creek below Plum Creek near Frankford (d) .....	05508805	73
CUIVRE RIVER BASIN		
Cuivre River near Troy (d,c,m) .....	05514500	74
DARDENNE CREEK BASIN		
Dardenne Creek at O'Fallon (d) .....	05514840	77
Dardenne Creek at Old Town St. Peters (d) .....	05514860	78
Burgermeister Spring near Weldon Spring (d,c) .....	384304090441801	79
Mississippi River at Grafton, IL (d) .....	05587450	82
Mississippi River below Grafton, IL (c,m,s) .....	05587455	83
MISSOURI RIVER BASIN		
Missouri River at Rulo, NE (d) .....	06813500	90
Davis Creek at Mound City (d) .....	06815555	91
Squaw Creek near Mound City (d) .....	06815575	92
NODAWAY RIVER BASIN		
Nodaway River near Graham (d,c,m) .....	06817700	93
Missouri River at St. Joseph (d,c,m) .....	06818000	97
PLATTE RIVER BASIN		
Platte River:		
One Hundred and Two River at Maryville (d) .....	06819500	100
Platte River near Agency (d) .....	06820500	101
Little Platte River near Plattesburg (d) .....	06821080	102
Smithville Reservoir near Smithville (e) .....	06821140	103
Little Platte River at Smithville (d) .....	06821150	104
Platte River at Sharps Station (d,c,m) .....	06821190	105
KANSAS RIVER BASIN		
Kansas River at DeSoto, KS (d) .....	06892350	107

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,  
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station Number	Page
MISSOURI RIVER BASIN--Continued		
Missouri River at Kansas City (d) .....	06893000	108
BLUE RIVER BASIN		
Blue River at Kansas City (d,c,m,t) .....	06893500	109
Brush Creek at Ward Parkway in Kansas City (d) .....	06893557	118
Brush Creek at Rockhill Road in Kansas City (d,c,m,t) .....	06893562	119
Blue River at 12th Street in Kansas City (d) .....	06893590	129
LITTLE BLUE RIVER BASIN		
Longview Reservoir at Kansas City (e) .....	06893791	130
Blue Springs Reservoir near Blue Springs (e) .....	06893885	131
Little Blue River near Lake City (d) .....	06894000	132
Missouri River at Waverly (d) .....	06895500	133
GRAND RIVER BASIN		
Middle Fork Grand River near Grant City (c,m) .....	06896187	134
East Fork Grand River at Allendale (c,m) .....	06896320	136
East Fork Big Creek near Bethany (d) .....	06897000	138
Grand River near Gallatin (d) .....	06897500	139
Thompson River near Mt. Moriah (c,m) .....	06898100	140
Weldon River at Princeton (c,m) .....	06898800	142
Thompson River at Trenton (d) .....	06899500	144
No Creek near Dunlap (c,m) .....	06899580	145
Medicine Creek at Harris (c,m) .....	06899950	147
Medicine Creek at Laredo (d) .....	06900050	149
Little Medicine Creek near Harris (c,m) .....	06900100	150
Locust Creek near Unionville (c,m) .....	06900900	152
Locust Creek near Linneus (d) .....	06901500	154
Grand River near Sumner (d,c,m) .....	06902000	155
CHARITON RIVER BASIN		
Chariton River at Livonia (d) .....	06904050	160
Chariton River at Novinger (d) .....	06904500	161
Chariton River near Prairie Hill (d,c,m) .....	06905500	162
Musselfork near Mystic (c,m) .....	06905725	165
LITTLE CHARITON RIVER BASIN		
East Fork Little Chariton River:		
Long Branch Creek at Atlanta (d) .....	06906150	167
Long Branch Reservoir near Macon (e) .....	06906190	168
East Fork Little Chariton River near Macon (d) .....	06906200	169
East Fork Little Chariton River near Huntsville (d,c,m) .....	06906300	170
Missouri River at Glasgow (d) .....	06906500	173
LAMINE RIVER BASIN		
Lamine River near Otterville (d) .....	06906800	174
Lamine River near Pilot Grove (c,m) .....	06907300	175
Blackwater River at Blue Lick (d) .....	06908000	177
Missouri River at Boonville (d) .....	06909000	178
MOREAU RIVER BASIN		
Moreau River near Jefferson City (d) .....	06910750	179
OSAGE RIVER BASIN		
Miami Creek near Butler (d) .....	06916675	180
Little Osage River at Horton (d) .....	06917060	181
Dry Wood Creek near Deerfield (d) .....	06917680	182
Marmaton River below Nevada (d) .....	06918065	183
Osage River above Schell City (d,c,m) .....	06918070	184
Sac River near Dadeville (d) .....	06918440	188
Turnback Creek above Greenfield (d) .....	06918460	189
Little Sac River:		
South Fork Little Dry Sac River near Springfield (d) .....	06918493	190
Little Sac River near Walnut Grove (c,m) .....	06918600	191
Little Sac River near Morrisville (d) .....	06918740	193
Stockton Lake near Stockton (e) .....	06918990	194

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,  
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station Number	Page
MISSOURI RIVER BASIN--Continued		
OSAGE RIVER BASIN--Continued		
Sac River at Highway J below Stockton (d) .....	06919020	195
Cedar Creek near Pleasant View (d) .....	06919500	196
Sac River near Caplinger Mills (d) .....	06919900	197
Pomme De Terre River near Polk (d,c,m) .....	06921070	198
Lindley Creek near Polk (d) .....	06921200	201
Pomme de Terre Lake near Hermitage (e) .....	06921325	202
Pomme de Terre River near Hermitage (d) .....	06921350	203
South Grand River below Freeman (c,m) .....	06921582	204
South Grand River near Clinton (d) .....	06921760	208
Harry S. Truman Reservoir at Warsaw (e) .....	06922440	209
Osage River below Harry S. Truman Dam at Warsaw (d) .....	06922450	210
Niangua River below Bennett Spring (c,m) .....	06923700	211
Niangua River at Tunnel Dam near Macks Creek (d) .....	06923950	213
Lake of the Ozarks near Bagnell (e) .....	06925500	214
Osage River near Bagnell (d) .....	06926000	215
Osage River below St. Thomas (d,c,m) .....	06926510	216
GASCONADE RIVER BASIN		
Gasconade River near Hazelgreen (d) .....	06928000	219
Roubidoux Creek above Ft. Leonard Wood (d) .....	06928300	220
Roubidoux Creek below Ft. Leonard Wood (d) .....	06928430	221
Roubidoux Spring at Waynesville (c,m) .....	06928440	222
Big Piney River near Big Piney (d) .....	06930000	225
Big Piney River below Ft. Leonard Wood (d) .....	06930060	226
Big Piney River at Devil's Elbow (c,m) .....	06930450	227
Gasconade River above Jerome (c,m) .....	06930800	229
Little Piney Creek at Newburg (d) .....	06932000	232
Gasconade River at Jerome (d) .....	06933500	233
Gasconade River near Rich Fountain (d) .....	06934000	234
Missouri River at Hermann (d,c,m) .....	06934500	235
Bonhomme Creek near Ellisville (d) .....	06935755	241
Bonhomme Creek near Clarkson Valley (d,c,m) .....	06935770	242
Caulks Creek at Chesterfield (d) .....	06935830	247
Creve Coeur Creek at Chesterfield (d) .....	06935850	248
Creve Coeur Creek near Creve Coeur (d,c,m) .....	06935890	249
Fee Fee Creek near Bridgeton (d,c,m) .....	06935955	253
Missouri River at St. Charles (d) .....	06935965	258
Cowmire Creek at Bridgeton (d,c,m) .....	06935980	259
Mill Creek near Florissant (d) .....	06935997	264
Coldwater Creek near Black Jack (d,c,m) .....	06936475	265
Spanish Lake Tributary near Black Jack (d) .....	06936530	269
LOWER MISSISSIPPI RIVER BASIN		
Watkins Creek at Bellefontaine Neighbors (d,c,m) .....	07001985	270
Maline Creek at Bellefontaine Neighbors (d,c,m) .....	07005000	274
Mississippi River at St. Louis (d,s) .....	07010000	278
River des Peres near University City (d,c,m) .....	07010022	282
River des Peres Tributary at Pagedale (d) .....	07010030	287
Engelholm Creek near Wellston (d,c,m) .....	07010035	288
Deer Creek at Ladue (d,c,m) .....	07010075	292
Deer Creek at Maplewood (d) .....	07010086	299
Mackenzie Creek near Shrewsbury (d) .....	07010090	304
Gravois Creek near Mehlville (d,c,m) .....	07010180	305
Martigney Creek near Arnold (d) .....	07010208	309

SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,  
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station Number	Page
LOWER MISSISSIPPI RIVER BASIN--Continued		
MERAMEC RIVER BASIN		
Meramec River:		
Maramec Spring near St. James (c,m) .....	07010500	310
Meramec River near Steelville (d) .....	07013000	312
Courtois Creek:		
Huzzah Creek near Steelville (c,m) .....	07014000	313
Courtois Creek at Berryman (c,m) .....	07014200	315
Meramec River near Sullivan (d,c,m) .....	07014500	317
Bourbeuse River near High Gate (d) .....	07015720	320
Bourbeuse River above Union (c,m) .....	07016400	321
Bourbeuse River at Union (d) .....	07016500	323
Big River at Irondale (d) .....	07017200	324
Big River near Richwoods (d,c,m) .....	07018100	325
Big River at Byrnesville (d) .....	07018500	328
Meramec River near Eureka (d) .....	07019000	329
Kiefer Creek near Ballwin (d,c,m) .....	07019072	330
Williams Creek near Peerless Park (d,c,m) .....	07019090	334
Fishpot Creek at Valley Park (d,c,m) .....	07019120	338
Grand Glaize Creek near Manchester (d) .....	07019150	342
Sugar Creek at Kirkwood (d) .....	07019175	343
Grand Glaize Creek near Valley Park (d,c,m) .....	07019185	344
Yarnell Creek at Fenton (d) .....	07019195	348
Fenton Creek near Fenton (d,c,m) .....	07019220	349
Meramec River at Paulina Hills (c,m) .....	07019280	353
Mattese Creek near Mattese (d,c,m) .....	07019317	355
Mississippi River at Chester, IL (d,s) .....	07020500	360
SALINE CREEK BASIN		
Saline Creek:		
South Fork Saline Creek near Perryville (d) .....	07020550	364
HEADWATER DIVERSION CHANNEL BASIN		
Castor River at Zalma (d,c,m) .....	07021000	365
Mississippi River at Thebes, IL (d,c,m,s) .....	07022000	368
ST. FRANCIS RIVER BASIN		
St. Francis River near Mill Creek (d) .....	07035800	377
St. Francis River near Saco (c,m) .....	07036100	378
Big Creek at Des Arc (d) .....	07037000	380
Big Creek at Sam A. Baker State Park (c,m) .....	07037300	381
St. Francis River near Patterson (d) .....	07037500	383
Wappapello Lake at Wappapello (e) .....	07039000	384
St. Francis River at Wappapello (d) .....	07039500	386
Right Chute of Little River:		
St. Johns Ditch near Henderson Mound (c,m) .....	07042450	387
Little River Ditch 1 near Morehouse (d) .....	07043500	391
Little River Ditches near Rives (c,m) .....	07046250	392
WHITE RIVER BASIN		
White River:		
Roaring River:		
Roaring River Spring near Cassville (c,m) .....	07050150	396
James River:		
Pearson Creek near Springfield (d,c,m) .....	07050690	398
James River near Springfield (d) .....	07050700	403
Wilson Creek at Springfield (d) .....	07052000	404
Wilson Creek near Springfield (d) .....	07052100	405
South Creek near Springfield (d) .....	07052120	406
Wilson Creek near Brookline (d,c,m) .....	07052152	407
Wilson Creek near Battlefield (d,c,m) .....	07052160	412
James River near Boaz (d,c,m) .....	07052250	419
Finley Creek below Riverdale (d,c,m) .....	07052345	424
James River at Galena (d,c,m) .....	07052500	431
Flat Creek at Jenkins (c,m) .....	07052800	437



SURFACE-WATER STATIONS, IN DOWNSTREAM ORDER,  
FOR WHICH RECORDS ARE PUBLISHED IN THIS VOLUME

	Station Number	Page
LOWER MISSISSIPPI RIVER BASIN--Continued		
WHITE RIVER BASIN		
Table Rock Lake near Branson (e) .....	07053400	439
White River below Table Rock Dam near Branson (c,t) .....	07053450	440
White River near Branson (d) .....	07053500	442
Lake Taneycomo at College of the Ozarks (c,t) .....	07053600	443
Lake Taneycomo at Branson (c,m) .....	07053700	445
Bull Creek near Walnut Shade (d) .....	07053810	449
Swan Creek near Swan (c,m) .....	07053900	450
Beaver Creek at Bradleyville (d) .....	07054080	452
North Fork River near Tecumseh (d,c,m) .....	07057500	453
Bryant Creek below Evans (c,m) .....	07057750	456
Bryant Creek near Tecumseh (d) .....	07058000	458
Black River:		
West Fork Black River at Centerville (c,m) .....	07061150	459
East Fork Black River near Ironton (c,m) .....	07061260	461
East Fork Black River near Lesterville (d) .....	07061270	463
Taum Sauk Creek near Lesterville (d) .....	07061280	464
Black River near Annapolis (d) .....	07061500	466
Black River below Annapolis (c,m) .....	07061600	467
Logan Creek at Ellington (d) .....	07061900	469
Clearwater Lake near Piedmont (e) .....	07062000	470
Black River at Poplar Bluff (d) .....	07063000	471
Current River above Akers (d) .....	07064533	472
Jacks Fork near Mountain View (d) .....	07065200	474
Jacks Fork above Alley Spring (c,m) .....	370857091265901	475
Jacks Fork at Alley Spring (d) .....	07065495	476
Alley Spring below Alley (c,m) .....	370901091262001	477
Mahans Creek above Eminence (c,m) .....	370911091223201	478
Jacks Fork at Eminence (d,c,m) .....	07066000	479
Jacks Fork ab 2nd Unnamed Hollow bl Eminence (c,m) .....	370905091204001	481
Jacks Fork above Lick Log Hollow below Eminence (c,m) .....	371014091201301	482
Jacks Fork above Two Rivers (c,m) .....	07066110	483
Jacks Fork above Powell Spring above Two Rivers (c,m) .....	371026091183301	485
Shawnee Creek above Two Rivers (c,m) .....	371019091180101	486
Jacks Fork above L. Shawnee Creek above Two Rivers (c,m) ...	371020091174101	487
Jacks Fork bl 3rd Unnamed Hollow above Two Rivers (c,m) ....	371054091173501	488
Current River at Van Buren (d) .....	07067000	489
Big Spring near Van Buren (d,c,m) .....	07067500	490
Current River at Doniphan (d,c,m) .....	07068000	493
Little Black River below Fairdealing (c,m) .....	07068510	496
Eleven Point River:		
Greer Spring at Greer (d,c,m) .....	07071000	498
Eleven Point River near Bardley (d,c,m) .....	07071500	501
ARKANSAS RIVER BASIN		
Arkansas River:		
Neosho River:		
Spring River near Carthage (d) .....	07185765	504
Spring River near Waco (d) .....	07186000	506
Center Creek near Smithfield (c,m) .....	07186480	507
Turkey Creek near Joplin (c,m) .....	07186600	512
Shoal Creek at Pioneer (d) .....	07186690	515
Shoal Creek above Joplin (d) .....	07187000	516
Big Sugar Creek near Powell (d) .....	07188653	517
Indian Creek near Lanagan (d) .....	07188885	518
Patterson Creek near Tiff City (c,m) .....	07188950	519
Elk River near Tiff City (d,c,m) .....	07189000	521
Buffalo Creek at Tiff City (d) .....	07189100	527

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS

The following continuous-record surface-water discharge or stage-only stations (gaging stations) in Missouri have been discontinued. Daily streamflow or stage records were collected and published for the period of record, expressed in water years, shown for each station. Discontinued project stations with less than three years of record have not been included. Information regarding these stations may be obtained from the District Office at the address given on the back side of the title page of this report.

[Letters after station name designate type of data collected:  
(d) discharge and (e) elevation (stage only)]

Station name	Type of record	Station number	Drainage area (mi <sup>2</sup> )	Period of record
Middle Fabius River near Baring	(d)	05497500	185	1930-1961
North River at Bethel	(d)	05500500	58.0	1930-1973
Oak Dale Branch near Emden	(d)	05503000	2.64	1955-1975
North Fork Salt River near Hunnewell	(d)	05503500	626	1931-1940, 1979-1988
Youngs Creek near Mexico	(d)	05506000	67.4	1930-1982
Middle Fork Salt River at Duncan's Bridge	(d)	05506190	200	1980-1982
Elk Fork Salt River near Paris	(d)	05507000	262	1930-1954, 1980-1982
Salt River near Monroe City	(d)	05507500	2,230	1939-1981
Calumet Creek near Clarksville	(d)	05509700	15.7	1965-1972
Tarkio River at Fairfax	(d)	06813000	508	1922-1990
Mill Creek at Oregon	(d)	06816000	4.90	1950-1976
Nodaway River near Burlington Junction	(d)	06817500	1,240	1922-1983
Platte River at Ravenwood	(d)	06818900	486	1921-1923, 1924-1925, 1928-1932, 1958-1971
White Cloud Creek near Maryville	(d)	06820000	6.06	1948-1970
Jenkins Branch at Gower	(d)	06821000	2.72	1950-1976
Line Creek at Riverside	(d)	06821280	19.2	1975-1981
Brush Creek at Main Street in Kansas City	(d)	06893560	14.8	1970-1979
Rock Creek at Independence	(d)	06893600	5.20	1967-1974
Shoal Creek at Claycomo	(d)	06893670	29.8	1975-1981
L. Blue River bl Longview Dam at Kansas City	(d)	06893793	50.3	1966-1999
East Fork L. Blue River near Blue Springs	(d)	06893890	34.4	1974-1999
East Fork Fishing River at Excelsior Spring	(d)	06894500	20.0	1950-1972
Sni-A-Bar Creek near Tarsney	(d)	06894680	29.1	1970-1979
Crooked River near Richmond	(d)	06895000	159	1948-1970
Wakenda Creek at Carrollton	(d)	06896000	248	1948-1970
Thompson Branch near Albany	(d)	06896500	5.58	1955-1972
Thompson River at Mount Moriah	(d)	06898100	891	1960-1977
Weldon River near Mercer	(d)	06898500	246	1939-1959
Weldon River at Mill Grove	(d)	06899000	494	1929-1972
Shoal Creek near Braymer	(d)	06899700	391	1957-1977
Medicine Creek near Galt	(d)	06900000	225	1921-1975, 1977-1990
West Yellow Creek near Brookfield	(d)	06902200	135	1959-1977
Hamilton Branch near New Boston	(d)	06902500	2.51	1955-1972
Mussel Fork near Musselfork	(d)	06906000	267	1948-1951, 1962-1990
Thomas Hill Lake near Thomas Hill	(e)	06906350	147	1966-1974
Middle Fork Chariton River below Salisbury	(d)	06906470	201	1964-1970
Burge Branch near Arrow Rock	(d)	06906600	0.33	1959-1973
Flat Creek near Sedalia	(d)	06906700	148	1958-1967
Lamine River at Clifton City	(d)	06907000	598	1922-1971
South Fork Blackwater near Elm	(d)	06907500	16.6	1954-1979
Blackwater River at Valley City	(d)	06907700	547	1958-1973
Shiloh Branch near Marshall	(d)	06908500	2.87	1952-1965
Moniteau Creek near Fayette	(d)	06909500	81	1948-1969
Petite Saline Creek near Boonville	(d)	06910000	182	1948-1967
Hinkson Creek at Columbia	(d)	06910230	44.8	1964-1976, 1986-1991

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

Station name	Type of record	Station number	Drainage area (mi <sup>2</sup> )	Period of record
Cedar Creek near Columbia	(d)	06910410	70.2	1966-1982, 1987-1991
Chesapeake Spring at Chesapeake	(d)	06918444	--	1926, 1932, 1936, 1954, 1963-1968
Oak Grove Branch near Brighton	(d)	06918700	1.30	1956-1975
Little Sac River at Aldrich	(d)	06918800	304	1967-1968
Pomme de Terre River near Bolivar	(d)	06921000	225	1950-1969
Pomme de Terre River at Hermitage	(d)	06921500	655	1921-1965
South Grand River at Archie	(d)	06921590	356	1969-1986
South Grand River at Urich	(d)	06921600	670	1960-1969
Big Creek at Blairstown	(d)	06921720	414	1960-1974
Brushy Creek near Blairstown	(d)	06921740	1.15	1960-1975
South Grand River near Brownington	(d)	06922000	1,660	1921-1971
Big Buffalo Creek near Stover	(d)	06922800	24.2	1965-1977
Niangua River near Windyville	(d)	06923250	338	1991-1996
Bennett Spring at Bennett Springs	(d)	06923500	--	1916-1920, 1928-1941, 1965-1995
Niangua River near Decaturville	(d)	06924000	627	1929-1969
Starks Creek at Preston	(d)	06925200	4.18	1956-1976
Van Cleve Branch near Meta	(d)	06926200	0.75	1956-1972
Osage River near St. Thomas	(d)	06926500	14,500	1931-1996
Big Hollow near Fulton	(d)	06927200	4.05	1957-1972
Osage Fork Gasconade River at Drynob	(d)	06927800	404	1962-1981
Laquey Branch near Hazlegreen	(d)	06928200	1.58	1958-1972
Gasconade River near Waynesville	(d)	06928500	1,680	1914-1971
Beeler Branch near Cabool	(d)	06928700	7.78	1967-1976
Little Beaver Creek near Rolla	(d)	06931500	6.45	1947-1975
Loutre River at Mineola	(d)	06935500	202	1947-1967
Coldwater Creek near Hazelwood	(d)	06936200	12.1	1996-2001
Coldwater Creek near St. Louis	(d)	06936500	43.6	1959-1965
Meramec River at Cook Station	(d)	07010350	199	1965-1981
Maramec Spring near St. James	(d)	07010500	--	1903-1906, 1921-1929, 1965-1986
Green Acre Branch near Rolla	(d)	07011500	0.62	1947-1975
Bourbeuse River near St. James	(d)	07015000	21.3	1947-1981
Lanes Fork near Rolla	(d)	07015500	0.225	1952-1971
Bourbeuse River near Spring Bluff	(d)	07016000	608	1943-1981
Dry Branch near Bonne Terre	(d)	07017500	3.35	1955-1975
Sandy Creek near Pevely	(d)	07019690	32.5	1966-1968, 1969-1972
Plattin Creek at Plattin	(d)	07019790	65.8	1965-1972
Saline Creek near Minnith	(d)	07020270	82.6	1968-1981
Brewers Creek near Ironton	(d)	07033800	2.19	1964-1966
St. Francis River near Roselle	(d)	07034000	234	1983-1997
Little St. Francis River at Fredericktown	(d)	07035000	90.5	1983-1997
Barnes Creek near Fredericktown	(d)	07035500	3.35	1955-1975
St. Francis River near Saco	(d)	07036100	664	1983-1997
Clark Creek near Piedmont	(d)	07037700	4.39	1956-1976
Little River Ditch 81 near Kennett	(d)	07041000	111	1926-1979
Little River Ditch 1 near Kennett	(d)	07042000	235	1926-1979
Little River Ditch 251 near Lilbourn	(d)	07042500	235	1945-1991
Castor River at Aquilla	(d)	07043000	175	1945-1981
Little River Ditch 251 near Kennett	(d)	07044000	883	1926-1979
Little River Ditch 66 near Kennett	(d)	07045000	--	1926-1979

## DISCONTINUED SURFACE-WATER DISCHARGE OR STAGE-ONLY STATIONS--Continued

Station name	Type of record	Station number	Drainage area (mi <sup>2</sup> )	Period of record
Little River Ditch 66-A near Kennett	(d)	07045500	--	1927-1965
Little River Ditch 259 near Kennett	(d)	07046000	89.0	1926-1979
Roaring River Spring near Cassville	(d)	07050150	--	1965-1968
James River near Strafford	(d)	07050580	165	1973-1986
Wilson Creek below Springfield	(d)	07052150	47.2	1967-1972
Hodgson Mill Spring at Sycamore	(d)	07057800	--	1965-1968
East Fork L. Black River near Lesterville	(d)	07061300	94.5	1960-1990
Black River near Leeper	(d)	07062500	987	1921-1994
Fudge Hollow near Licking	(d)	07064300	1.72	1956-1976
Montauk Springs at Montauk	(d)	07064400	--	1964-1968
Big Creek near Yukon	(d)	07064500	8.36	1949-1975, 1960-1990
Round Spring at Round Spring	(d)	07065000	--	1928-1939, 1965-1979
Alley Spring at Alley	(d)	07065500	--	1928-1939, 1965-1979
Current River near Eminence	(d)	07066500	1,272	1921-1975
Middle Fork Little Black River at Grandin	(d)	07068250	6.85	1980-1984
North Prong Little Black River near Grandin	(d)	07068300	39.4	1980-1984
Little Black River near Grandin	(d)	07068380	79.5	1980-1984
Little Black River below Fairdealing	(d)	07068510	194	1980-1986
Logan Creek at Oxly	(d)	07068540	37.5	1980-1984
Little Black River at Success, AR	(d)	07068600	386	1980-1986
Fourche River near Poynor	(d)	07068863	87.2	1976-1983
Eleven Point River near Thomasville	(d)	07070500	361	1950-1976
Stahl Creek near Miller	(d)	07185500	3.86	1950-1976
Spring River at La Russell	(d)	07185700	306	1947-1981
Center Creek near Cartersville	(d)	07186400	232	1962-1991
Center Creek below Carl Junction	(d)	07186475	299	1993-1995
Turkey Creek near Joplin	(d)	07186600	41.8	1963-1972

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS

The following surface-water-quality stations in Missouri have been discontinued or converted to partial-record stations. Water-quality data (daily or periodic samples with collection frequency not less than quarterly) were collected and published for the period of record shown for each station. Discontinued project stations with less than three years of record are not included. Information regarding these stations may be obtained from the District Chief at the address given on the back of the title page of this report.

[Type of record: (B) biological, (C) chemical, (M) microbiological, (S) sediment, (T) temperature]

Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
Mississippi River at Canton	05495150	--	C,T	1969-1975
Middle Fabius River near Monticello	05498000	393	S	1980-1986
North River at Palmyra	05501000	373	C	1972-1975
Mississippi River at Hannibal	05501600	--	C,M	1982-1989
North Fork Salt River near Shelbina	05502500	481	S	1988-1994
North Fork Salt River near Hunnewell	05503500	626	S	1980-1988
Middle Fork Salt River at Paris	05506500	356	S	1980-1997
Salt River near New London	05508000	2,480	C,M,T	1967-1975, 1977-1990
			S	1980-1997
Mississippi River at Alton, IL	05587500	171,500	S	1980-1985, 1986-1989
Mississippi River below Alton, IL	05587550	171,500	C,M	1975-1989
Nodaway River near Oregon	06817800	--	C,M	1968-1975, 1977-1989
Platte River at Platte City	06821200	--	C	1967-1975
Missouri River at Sibley	06894100	--	C,T	1972-1975
Thompson River near Chillicothe	06899620	--	C,M	1968-1975, 1983-1987
East Fork Little Chariton River near Macon	06906200	112	C	1971-1974
Middle Fork L. Chariton R. below Salisbury	06906470	201	C,M	1983-1986
Burge Branch near Arrow Rock	06906600	0.33	S	1961-1964
Lamine River near Blackwater	06908800	2,610	B,C,M,T	1979-1986
Missouri River at Boonville	06909000	505,700	T	1953-1959, 1960-1964
Hinkson Creek at Columbia	06910230	70.2	T	1987-1991
Cedar Creek near Columbia	06910410	44.8	C,M	1987-1991
Cedar Creek near Ashland	06910414	--	C,M	1983-1989
Marais Des Cygnes River near Worland	06916650	3,230	C,M	1962-1963, 1972-1975, 1977-1981
East Fork Drywood Creek at Prairie State Park	06917630	--	C,M	1994-1997
Sac River near Dadeville	06918440	257	C,M,T	1974-1978, 1980-1982, 1983-1987
Stockton Lake near Stockton	06918990	1,160	T	1974-1977
Pomme de Terre River near Hermitage	06921350	615	T	1974-1977
Pomme de Terre River at Hermitage	06921500	615	T	1970-1978
South Grand River at Urich	06921600	670	C,M	1983-1987
South Grand River near Clinton	06921760	1,270	S	1991-1999
West Fork Tebo Creek near Lewis	06922190		C,M	1983-1991
Trib. to Middle Fork Tebo Creek nr Leeton	06922075	--	C	1989-1992
Tebo Creek at Leesville	06922200	--	B,C,M,T	1978-1983
Osage River at Warsaw	06922500	11,500	T	1969-1978
Big Buffalo Creek near Stover	06922800	24.2	T	1965-1977
Big Buffalo Creek at Big Buffalo Wildlife Area	06922850	24.5	C,M	1994-1997
Dousinbury Creek near Wall Street	06923150	39.5	C,M	1993-1997
Niangua River near Windyville	06923250	338	C,M	1991-1995
Bennett Spring at Bennett Springs	06923500	--	C,M	1991-1993
Ha Ha Tonka Spring at Ha Ha Tonka State Park	06924500	--	C,M	1994-1996
Coakley Hollow Spr. Br. at Lake of the Ozarks	06925445	--	C,M	1994-1996
Gasconade River near Hooker	06928600	--	C,M	1977-1986
Missouri River near St. Louis	06935840	--	C,T	1969-1974
Paddy Creek above Slabtown Springs	06929318	338	C,M	1991-1995
Shanghai Spring near Waynesville	06930400		C,M	1994-1997

## DISCONTINUED SURFACE-WATER-QUALITY STATIONS--Continued

Station name	Station number	Drainage area (mi <sup>2</sup> )	Type of record	Period of record
Mississippi River at East St. Louis, IL	07001000	--	C	1969-1973
Crooked Creek near Dillard	07013050	--	C	1982-1988
Coonville Creek at St. Francis State Park	07017605		C,M	1993-1997
Meramec River near Eureka	07019000	3,788	C,M	1978-1994
Pickle Creek at Hawn State Park	07020200	--	C,M	1994-1997
Mississippi River at Cape Girardeau	07020850	--	C,T	1969-1974
Headwater Diversion Channel near Allenville	07021800	--	C	1969-1975
Big Creek at Chloride	07036940	--	C	1969-1975, 1983-1990
St. Francis River at St. Francis, AR	07040100	--	C	1969-1975
Little River Ditch 1 near Morehouse	07043500	450	C,M	1996-1997
Little River Ditches near Kennett	07046001	--	C,M	1969-1970, 1972-1973, 1977-1989, 1992-1993
Roaring River at Roaring River State Park	07050152	--	C,M	1991-1993
James River near Nixa	07050750	273	T	1966-1975, 1977-1980
James River near Wilson Creek	07051600	--	C,M	1967-1982, 1983-1987
Wilson Creek near Springfield	07052100	31.4	C,T	1972-1982
Wilson Creek below Springfield	07052150	47.2	C,T	1967-1970, 1970-1972
James River west of Nixa	07052200	440	C	1962-1963, 1965-1967
Finley Creek at Riverdale	07052340	--	C	1967-1975
Double Spring near Dora	07057475	--	C,M	1994-1997
Black River at Poplar Bluff	07063000	1,245	C,M	1983-1987
Black River below Poplar Bluff	07063050	--	C	1969-1975
Main Ditch near Neelyville	07063300	--	C	1969-1975
Middle Fork Little Black River at Grandin	07068250	6.85	T	1980-1984
North Prong Little Black River near Grandin	07068300	39.4	C,M	1980-1984
Little Black River near Grandin	07068380	79.5	C,M,S,T	1980-1984
Logan Creek at Oxly	07068540	37.5	C,M,S,T	1980-1984
Little Black River near Naylor	07068550	--	C	1969-1975
Little Black River at Success, AR	07068600	386	C,M,S,T	1980-1986
Fourche River near Poynor	07068863	87.2	T	1976-1983
Fourche River near Middlebrook, AR	07068867	--	C	1969-1975
Spring River near Thayer	07069170	--	C	1969-1975
Mammoth Spring at Mammoth Spring, AR	07069200	--	C,M	1994-1996
Eleven Point River below Bardley	07071900	--	C	1969-1975
Spring River near Waco	07186000	1,164	C	1965-1975, 1977-1978, 1980-1981
Center Creek near Carterville	07186400	232	C,M	1980-1989
Shoal Creek above Joplin	07187000	427	C,M	1968-1968, 1979-1982
Shoal Creek near Galena, KS	07187560	--	C	1968-1975
Lost Creek at Seneca	07188500	42	C	1967-1975
Little Sugar Creek at Caverna	07188820	--	C	1967-1975
Buffalo Creek at Tiff City	07189100	--	C	1967-1975

## WATER RESOURCES DATA - MISSOURI 2002

### INTRODUCTION

The Water Resources Division of the U.S. Geological Survey, in cooperation with local, State, and Federal agencies and organizations, obtains a large quantity of data pertaining to the water resources of Missouri each water year (October 1 to September 30). These data, accumulated during many water years, constitute a valuable data base for developing an improved understanding of the water resources of Missouri. To make these data readily available to interested parties outside the U.S. Geological Survey, the data are published annually in this report series, entitled "WATER RESOURCES DATA - MISSOURI." This volume contains records for water discharge at 172 gaging stations; elevation at 12 lakes and reservoirs; water quality at 113 sampling stations (including 2 lakes); and data for 39 crest-stage stations.

Records of discharge and stage of streams, and contents or stage of lakes and reservoirs were first published in a series of U.S. Geological Survey Water-Supply Papers entitled, "Surface Water Supply of the United States." These Water-Supply Papers were in an annual series through September 30, 1960, and then in a 5-year series for 1961-65 and 1966-70. Records of chemical quality, water temperature, and suspended sediment were published from 1941 to 1970 in an annual series of Water-Supply Papers entitled, "Quality of Surface Waters of the United States." Records of ground-water levels were published from 1935 to 1974 in a series of Water-Supply Papers entitled, "Ground-Water Levels in the United States." Water-Supply Papers are in the libraries of the principal cities in the United States or may be purchased from the U.S. Geological Survey, Information Services, Federal Center, Box 25286, Denver, CO 80225.

For water years 1961 through 1974, streamflow data were released by the U.S. Geological Survey in annual reports on a State-boundary basis. Water-quality records for water years 1964 through 1974 similarly were released either in separate reports or in conjunction with streamflow records.

Beginning with water year 1975, water data for streamflow, water quality, and ground water are published in Survey reports on a State-boundary basis. These reports carry an identification number consisting of the two-letter State abbreviation, the last two digits of the water year, and the volume number. For example, this volume is identified as "U.S. Geological Survey Water-Data Report MO-02-1."

For archiving and general distribution, the reports for water years 1971-74 also are identified as water-data reports. These water-data reports are for sale in paper copy or in microfiche by the National Technical Information Service, U.S. Department of Commerce, Springfield, VA 22161.

Additional information, including current prices, for ordering specific reports may be obtained from the District Chief at the address given on back of the title page or by telephone (573) 308-3667.

### COOPERATION

The U.S. Geological Survey and State and local agencies and organizations in Missouri have had cooperative agreements for the systematic collection of streamflow records since 1921, and for water-quality records since 1964. Organizations that assisted in collecting data published in this report through cooperative agreements are:

City of Columbia  
City of Perryville  
City Utilities of Springfield  
Holt County  
Kansas City Water Service Department  
Metropolitan St. Louis Sewer Dist.  
Missouri Department of Conservation  
Missouri Department of Natural Resources  
Geological Survey and Resource Assessment  
Division  
Water Protection and Soil Conservation  
Division  
Water Pollution Control Program  
Missouri Department of Transportation  
St. Charles County Rivers and Streams Proj.

The following Federal, State, and local agencies and organizations assisted in the collection of data published in this report by providing funds or services:

Ameren UE Company of Missouri  
National Park Service, Midwest Region  
Sho-Me Power Electric Cooperative  
U.S. Army Corps of Engineers  
U.S. Department of Agriculture  
U.S. Forest Service  
U.S. Department of the Army  
U.S. Department of Commerce  
National Oceanic and  
Atmospheric Administration  
National Weather Service  
U.S. Department of Energy  
U.S. Fish and Wildlife Service

## WATER USE--2000

Listed below are general water-use facts for the state of Missouri. The major water uses and percentage of surface water and ground water for 2000 are shown in figure 1.

## MISSOURI WATER USE FACT SHEET

1. Total water use in Missouri was 8,240 million gallons per day (Mgal/d).
2. Total population was 5.60 million, an increase of 5.3 percent from 1995.
3. Per capita water use for all uses was 1,470 gallons per person per day.
4. Surface-water withdrawals totalled 6,450 Mgal/d, about 78.3 percent of the total use. The largest use was in the St. Louis and Kansas City metropolitan areas.
5. Ground-water withdrawals totalled 1,790 Mgal/d, about 21.7 percent of total use. The largest ground-water use was for irrigation in southeastern Missouri.
6. The largest overall use of water was for thermoelectric power generation, about 5,640 Mgal/d to produce 76,700 gigawatt-hours of electricity.
7. Surface water accounts for 5,620 Mgal/d (99.8 percent) of the thermoelectric power generation use. About 5,200 Mgal/d of surface water was used by plants with once-through cooling water systems; the remainder was used by plants with recirculating cooling water systems.
8. The largest use of ground water was 1,380 Mgal/d for irrigation. Total irrigation water use was 1,430 Mgal/d.
9. Water withdrawals by public suppliers was 872 Mgal/d; 68.1 percent surface water and 31.9 percent ground water.
10. Domestic water use was 491 Mgal/d; 11 percent self-supplied and 89 percent public-supplied. Per capita domestic water use was 87.8 gallons per person per day.
11. Commercial water use was 87.0 Mgal/d; 14 percent self-supplied and 86 percent public-supplied.
12. Industrial and mining water use was 200 Mgal/d; 40 percent self-supplied and 60 percent public-supplied.
13. Public use and losses were 238 Mgal/d, calculated from the total water withdrawals for public supply minus deliveries to domestic, commercial, industrial, and thermoelectric uses.
14. Non-irrigation agriculture water use was 156 Mgal/d for livestock and aquaculture use. About 83.3 Mgal/d is used for fish farms and in-stream fish hatcheries.
15. Water use for in-stream and off-stream hydroelectric power generation was 10,900 Mgal/d to produce 408 gigawatt-hours of electricity. These values are not included in the withdrawal totals, as the water was left in or returned to the stream with no appreciable losses.



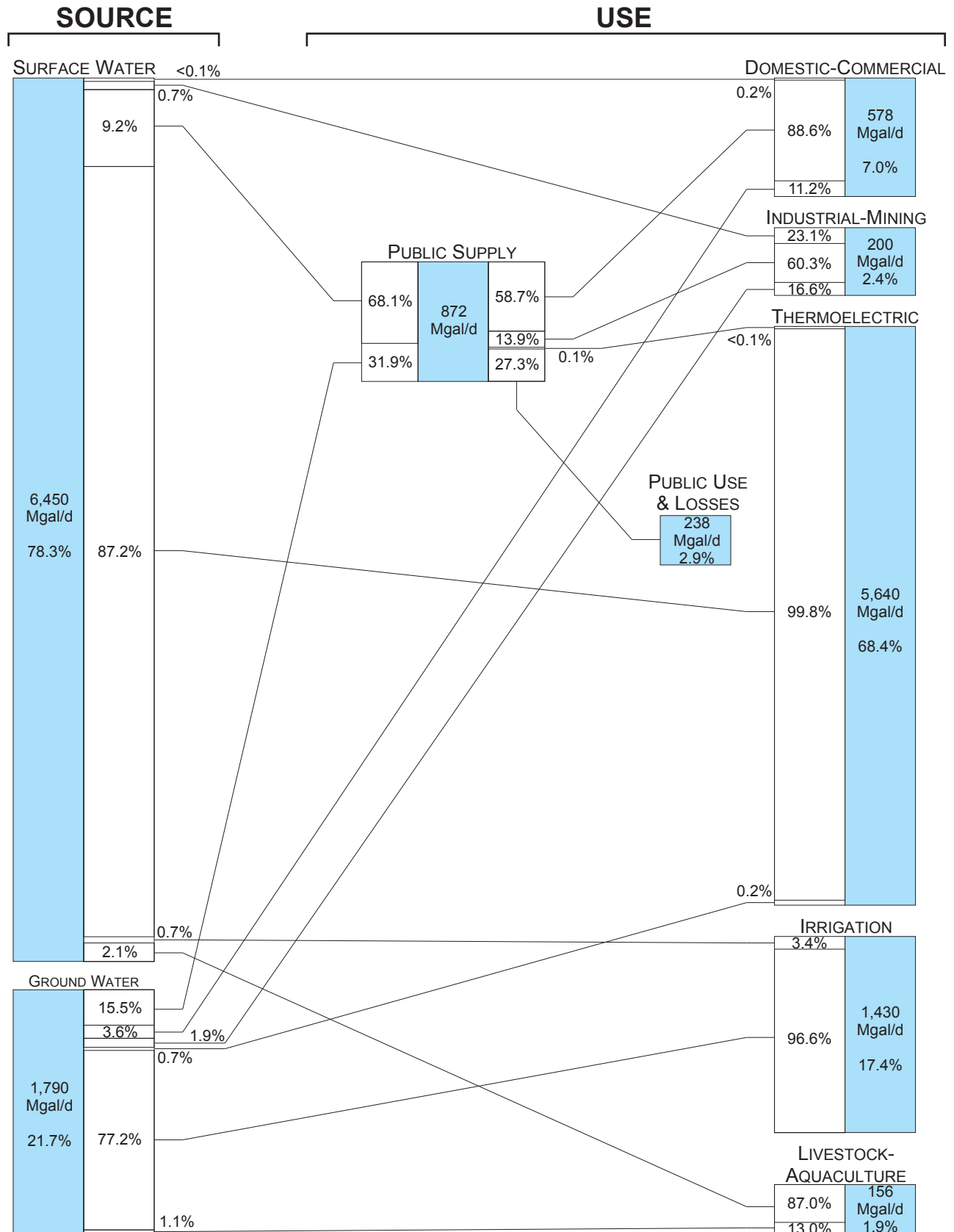


Figure 1. Source and use values and percentages for major offshore water-use categories in Missouri during 2000.

## PHYSIOGRAPHY

Missouri has three distinct physiographic areas--the Central Lowland in the north and west, the Mississippi Alluvial Plain in the southeast, and between them the Ozark Plateaus (Figure 2).

The Central Lowland includes most of the area north of the Missouri River and a large area south of the river in the western part of the State. Elevations range from about 450 to 1,000 feet above National Geodetic Vertical Datum of 1929. The area has numerous wide, flat valleys incised by rivers.

The Ozark Plateaus in the southern part of the State is wooded, rugged, and has deep, narrow valleys with sharp ridges separating the valleys. Elevations range from about 1,000 to 1,600 feet above National Geodetic Vertical Datum of 1929.

The Mississippi Alluvial Plain (Bootheel) is a relatively flat area of about 3,000 square miles in the extreme southeast part of the State. Elevations range from about 200 to 300 feet above National Geodetic Vertical Datum of 1929. The area is well drained and contains excellent farmland.

## SUMMARY OF HYDROLOGIC CONDITIONS

Surface Water--Streamflow

Streamflow varies seasonally in Missouri and often reflects precipitation patterns unless the stream is regulated. Precipitation was above normal throughout the entire state during January and May. Missouri received below normal precipitation during February. Above normal precipitation was experienced in the Northwest Prairie (figure 3) in April; the Northeast Prairie in October, April, and August; the West Central Plains in October, and April; the West Ozarks in October, December, April, and July; the East Ozarks in October, November, December, March, April, August, and September; and the Bootheel in October, November, December, March, June, and September.

Generally, the 2002 water year mean discharges were greater than long-term mean discharges in southern and northeast Missouri and less than long-term mean discharges in northwest Missouri (figure 2). Monthly discharges during the 2002 water year and long-term monthly mean discharges at six representative stations are shown in Figure 3.

Peak discharges for the 2002 water year are compared to the peak discharges for the period of record at 14 selected gaging stations in Table 1. The 7-day average low flow for the 2001 water year is compared to the 7-day, 2-year low flow and minimum flow for selected stations in Table 2. The 7-day, 2-year low flow is the 7-day average minimum flow with a recurrence interval of 2 years.

**Table 1: Comparisons of peak discharge for the 2002 water year with those for period of record for selected stations**

Station identification	Peak discharge during <u>2002 water year</u>		Peak discharge for <u>period of record</u>	
	Cubic feet per second	Date	Cubic feet per second	Date
05495000 Fox River at Wayland	10,900	May 13	26,400	Apr. 22, 1973
05587450 Mississippi River at Grafton, Ill.	380,000	May 15	598,000	Aug. 1, 1993
06893000 Missouri River at Kansas City	73,900	May 13	573,000	July 14, 1951
06894000 Little Blue River near Lake City	5,130	May 25	42,300	Aug. 13, 1982
06897500 Grand River near Gallatin	28,700	May 12	89,800	July 7, 1993
06905500 Chariton River near Prairie Hill	37,100	May 13	37,100	
06933500 Gasconade River at Jerome	51,700	May 10	136,000	Dec. 5, 1982
06934500 Missouri River at Hermann	348,000	May 14	750,000	July 31, 1993
07010000 Mississippi River at St. Louis	682,000	May 17	1,080,000	Aug. 1, 1993
07019000 Meramec River near Eureka	56,600	May 11	145,000	Dec. 6, 1982
07022000 Mississippi River at Thebes, Ill.	838,000	May 18	996,000	Aug. 7, 1993
07057500 North Fork River near Tecumseh	55,700	May 8	133,000	Nov. 19, 1985
07068000 Current River at Doniphan	70,400	May 10	122,000	Dec. 3, 1982
07186000 Spring River near Waco	35,900	May 9	151,000	Sept. 26, 1993

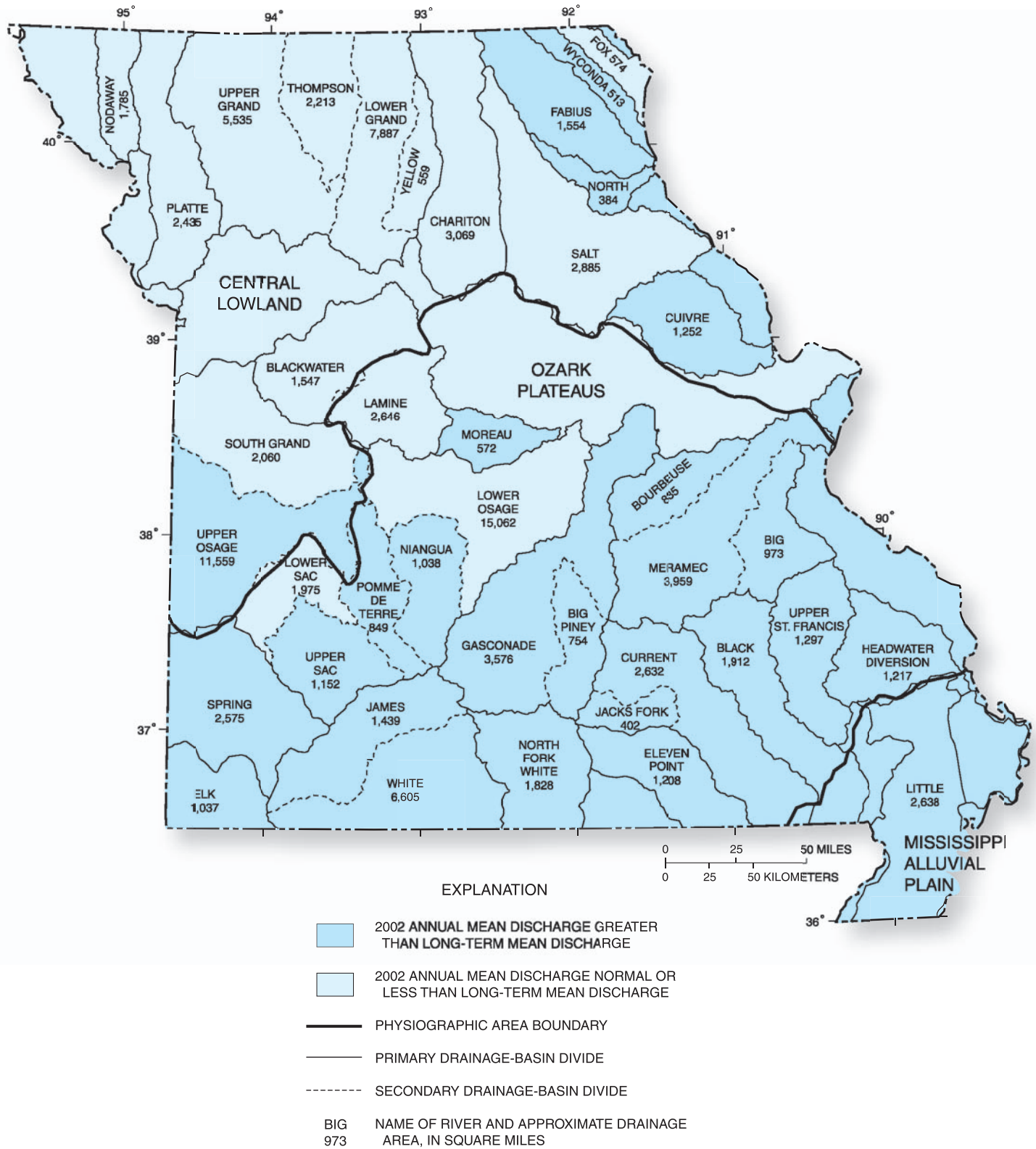


Figure 2. Major drainage basins, physiographic areas, and areas of greater than long-term mean discharge during 2002.

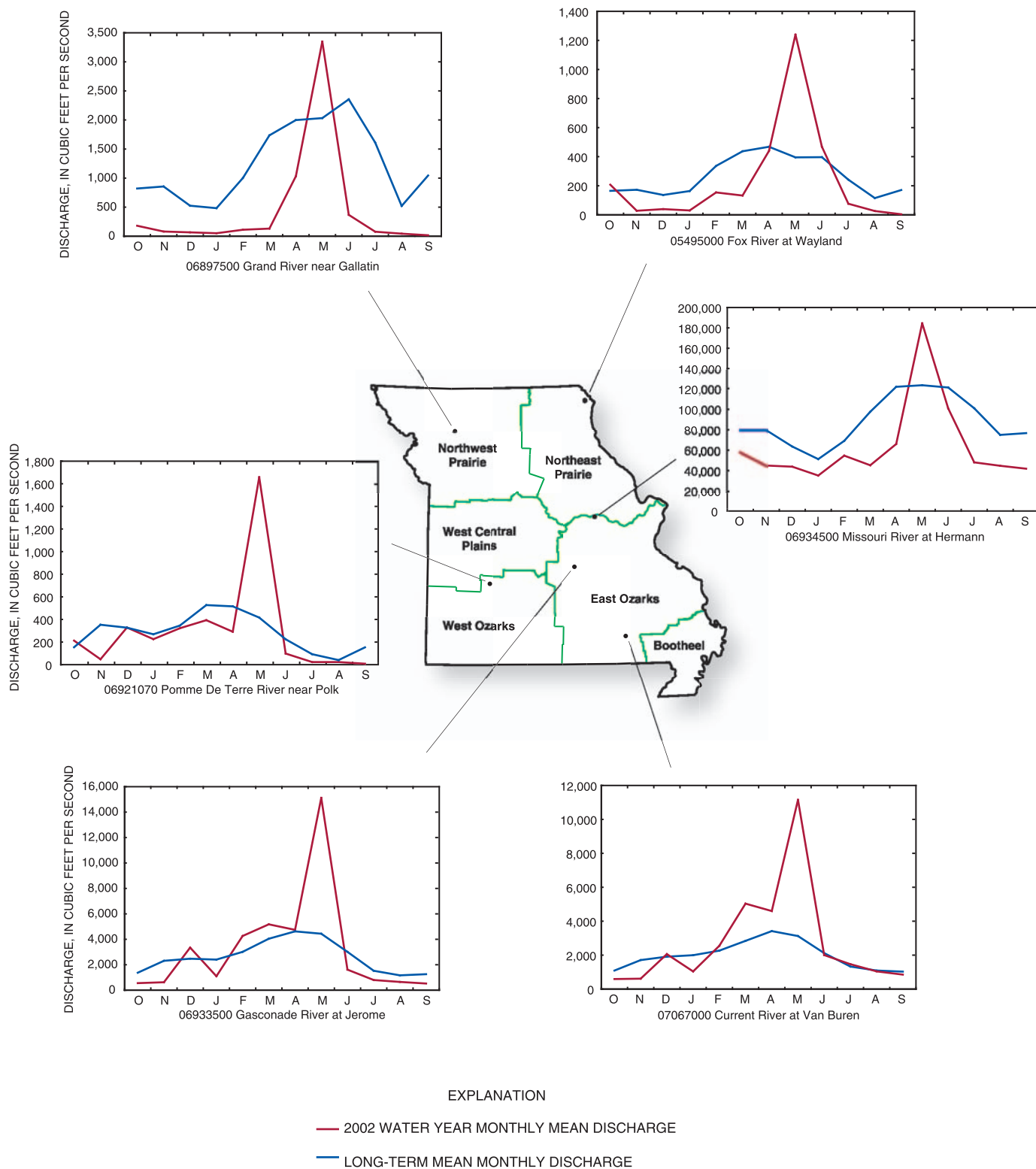


Figure 3. Comparison of 2002 water-year mean discharge to long-term mean discharge.

**Table 2.--Comparisons of 2002 7-day low flows to 7-day, 2-year low flows and minimum flows for the period of record at selected stations**

[Flows in cubic feet per second]				
Station identification and period of record used (water years)	Average 7-day low flows		Minimum flows for period of record used	
	2002	2-year <sup>1</sup>	Discharge	Years of occurrence
05495000 Fox River at Wayland (1922-97)	2.0	1.3	0	Several years
06820500 Platte River near Agency (1933-97)	18	17	0	Several years
06921070 Pomme de Terre River near Polk (1969-97)	6.1	3.0	0.3	1980
07016500 Bourbeuse River at Union (1921-97)	31	32	13	1956
07067000 Current River at Van Buren (1912-97)	536	700	479	1956
07187000 Shoal Creek above Joplin (1942-97)	84	92	16	1954

<sup>1</sup> Skelton, John, 1976, Missouri stream and springflow characteristics--Low-flow frequency and flow duration: Rolla, Missouri Division of Geology and Land Survey Water Resources Report 32, 76 p.

#### Water Quality--Streamflow

Samples for determining the chemical quality of streamflow were collected at 109 stations in Missouri. Data collected at these stations, in addition to streamflow data, include some or all of the following properties or constituents: water temperature, specific conductance, dissolved oxygen, pH, carbonate, bicarbonate, alkalinity, inorganic constituents, nutrients,

trace elements, indicator bacteria, sediment, and pesticides.

Missouri streams generally are not contaminated by industrial wastes. Localized contamination may occur near urban areas, industrialized centers, agricultural-chemical-use areas, and waste-dump sites.

**Table 3.--Range of dissolved-solids concentrations in selected streams during the water year.**

Station identification	Dissolved-solids concentration (milligrams per liter)	
	Minimum	Maximum
Cuivre River near Troy	188	230
Missouri River at St. Joseph	440	548
Grand River near Sumner	262	401
Osage River below St. Thomas	140	148
Gasconade River above Jerome	125	206
Missouri River at Hermann	176	497
Meramec River at Paulina Hills	172	260

Daily suspended-sediment samples and data on the particle size of suspended sediment were collected at four stations in Missouri. At three Missouri River stations, point suspended-sediment samples and particle-size data were

collected periodically. The following table lists two selected stations on the Mississippi River at Grafton and Thebes, Ill. and their minimum and maximum daily mean suspended-sediment concentrations during water year.

**Table 4.--Minimum and maximum daily mean suspended-sediment concentrations at two selected stations.**

Station identification	Daily mean suspended-sediment concentration (milligrams per liter)	
	Minimum	Maximum
Mississippi River at Grafton, IL	40	737
Mississippi River at Thebes, IL	72	987

## SPECIAL NETWORKS AND PROGRAMS

Hydrologic Benchmark Network is a network of 50 sites in small drainage basins around the country whose purpose is to provide consistent data on the streamflow representative undeveloped watersheds nationwide, and to provide analyses on a continuing basis to compare and contrast conditions observed in basins more obviously affected by human activities. At 10 of these sites, water-quality information is being gathered on major ions and nutrients, primarily to assess the affects of acid deposition on stream chemistry. Additional information on the Hydrologic Benchmark Program can be found at:

<http://water.usgs.gov/hbn/>.

National Stream-Quality Accounting Network (NASQAN) monitors the water quality of large rivers within the Nation's largest river basins. From 1995 through 1999, a network of approximately 40 stations were operated in the Mississippi, Columbia, Colorado, and Rio Grande. From 2000 through 2004, sampling was reduced to a few index stations on the Colorado and Columbia so that a network of 5 stations could be implemented on the Yukon River. Samples are collected with sufficient frequency that the flux of a wide range of constituents can be estimated. The objective of NASQAN is to characterize the water quality of these large rivers by measuring concentration and mass transport of a wide range of dissolved and suspended constituents, including nutrients, major ions, dissolved and sediment-bound heavy metals, common pesticides, and inorganic and organic forms of carbon. This information will be used (1) to describe the long-term trends and changes in concentration and transport of these constituents; (2) to test findings of the National Water-Quality Assessment Program (NAWQA); (3) to characterize processes unique to large-river systems such as storage and remobilization of sediments and associated contaminants; and (4) to refine existing estimates of off-continent transport of water, sediment, and chemicals for assessing human effects on the world's oceans and for determining global cycles of carbon, nutrients, and other chemicals. Additional information about the NASQAN Program can be found at:

<http://water.usgs.gov/nasqan/>.

The Ambient Water-Quality Network (AWQN) is a statewide data-collection network designed by both the U.S. Geological Survey and the Missouri Department of Natural Resources to meet many of the information needs of State agencies and other groups involved in Statewide water-quality planning and management. There are currently 65 member stations within this network. Each station has been assigned a U.S. Geological Survey downstream station number under which all data are stored in NWIS (the U.S. Geological Survey national water-quality data base). The objectives of AWQN are (1) to obtain information on the quality and quantity of water moving within the State; (2) provide for a historical data base of water-quality information that can be used by State planning and management agencies to make informed decisions about cultural impacts on the State's surface waters; and (3) provide for consistent methodology in data collection, laboratory analysis, and data reporting.

Additional information about the AWQN Program is available through the World Wide Web at:

<http://missouri.usgs.gov>

The National Atmospheric Deposition Program/National Trends Network (NADP/NTN) provides continuous measurement and assessment of the chemical constituents in precipitation throughout the United States. As the lead federal agency, the USGS works together with over 100 organizations to provide a long-term, spatial and temporal record of atmospheric deposition generated from a network of 225 precipitation chemistry monitoring sites. This long-term, nationally consistent monitoring program, coupled with ecosystem research, provides critical information toward a national scorecard to evaluate the effectiveness of ongoing and future regulations intended to reduce atmospheric emissions and subsequent impacts to the Nation's land and water resources. Reports and other information on the NADP/NTN Program, as well as all data from the individual sites, can be found at:

<http://bqs.usgs.gov/acidrain/>.

The National Water-Quality Assessment (NAWQA) Program of the U.S. Geological Survey is a long-term program with goals to describe the status and trends of water-quality conditions for a large, representative part of the Nation's ground- and surface-water resources; provide an improved understanding of the primary natural and human factors affecting these observed conditions and trends; and provide information that supports development and evaluation of management, regulatory, and monitoring decisions by other agencies.

Assessment activities are being conducted in 59 study units (major watersheds and aquifer systems) that represent a wide range of environmental settings nationwide and that account for a large percentage of the Nation's water use. A wide array of chemical constituents will be measured in ground water, surface water, streambed sediments, and fish tissues. The coordinated application of comparative hydrologic studies at a wide range of spatial and temporal scales will provide information for decision making by water-resources managers and a foundation for aggregation and comparison of findings to address water-quality issues of regional and national interest.

Communication and coordination between USGS personnel and other local, State, and federal interests are critical components of the NAWQA Program. Each study unit has a local liaison committee consisting of representatives from key federal, State, and local water resources agencies, Indian nations, and universities in the study unit. Liaison committees typically meet semiannually to discuss their information needs, monitoring plans and progress, desired information products, and opportunities to collaborate efforts among the agencies. Additional information about the NAWQA Program can be found at:

[http://water.usgs.gov/nawqa/nawqa\\_home.html](http://water.usgs.gov/nawqa/nawqa_home.html)

Radiochemical Programs is a network of regularly sampled water-quality stations where samples are collected to be analyzed for radioisotopes. The streams that are sampled represent major drainage basins in the conterminous United States.

#### EXPLANATION OF THE RECORDS

The surface- and ground-water records published in this report are for the water year that began October 1, 2001, and ended September 30, 2002. A calendar of the water year is provided on the inside of the front cover. The records contain streamflow data, stage and content data for lakes and reservoirs, and water-quality data for the surface water. The following sections of the introductory text are presented to provide users with a more detailed explanation of how the hydrologic data published in this report were collected, analyzed, computed, and arranged for presentation.

#### Station Identification Numbers

Each data station, whether stream site or well, in this report is assigned a unique identification number. This number is unique in that it applies specifically to a given station and to no other. The number usually is assigned when a station is first established and is retained for that station indefinitely. The system used by the U.S. Geological Survey to assign identification numbers for surface-water stations and for ground-water sites will differ, but both are based on geographic location. The "downstream order" system is used for regular surface-water stations and the "latitude-longitude" system is used for wells and, in Missouri, for surface-water stations where only miscellaneous measurements are made.

#### Downstream Order and Station Number

Since October 1, 1950, the order of listing hydrologic-station records in U.S. Geological Survey reports is in a downstream direction along the mainstream. All stations on a tributary entering upstream from a mainstream station are listed before that station. A station on a tributary that enters between two mainstream stations is listed between them. A similar order is followed in listing stations on first rank, second rank, and other ranks of tributaries. The rank of any tributary on which a station is situated is indicated by an indentation in a list of stations in the front of the report. Each indentation represents one rank. The downstream order and system of indentation show which stations are on tributaries between any two stations and the rank of the tributary on which each station is situated.

As an added means of identification, each hydrologic station and partial-record station has been assigned a station number. These are in the same downstream order used in this report. In assigning station numbers, no distinction is made between partial-record stations and other stations; therefore, the station number for a partial-record station indicates downstream-order position in a list made up of both types of stations. Gaps are left in the series of numbers to allow for new stations that may be established; hence, the numbers are not consecutive. The complete 8-digit number for each station such as 06909000, which appears just to the left of the station name, includes the 2-digit part number "06" plus the 6-digit downstream-order number "909000".

### Numbering System for Wells and Miscellaneous Sites

The 8-digit downstream-order station numbers are not assigned to miscellaneous sites where only random water-quality samples or discharge measurements are taken. The miscellaneous site numbering system of the U.S. Geological Survey is based on the grid system of latitude and longitude. The system provides the geographic location of the miscellaneous sites and a unique number for each site. The number consists of 15 digits. The first 6 digits denote the degrees, minutes, and seconds of latitude, and the next 7 digits denote degrees, minutes, and seconds of longitude, and the last 2 digits (assigned sequentially) identify the sites within a 1-second grid (Figure 4).

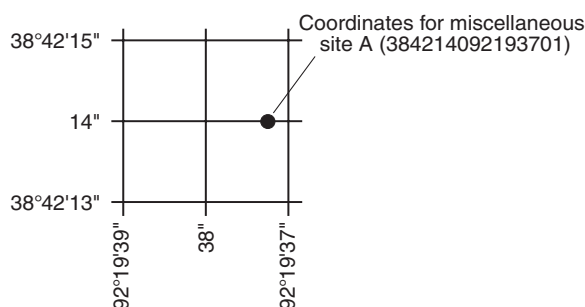


Figure 4. System for numbering miscellaneous sites (latitude and longitude).

### Records of Stage and Water Discharge

Records of stage and water discharge may be complete or partial. Complete records of discharge are those obtained using a continuous stage-recording device through which either instantaneous or mean daily discharge may be computed for any time, or any period of time, during the period of record. Complete records of lake or reservoir content, similarly, are those for which stage or content may be computed or estimated with reasonable accuracy for any time, or any period of time. They may be obtained using a continuous stage-recording device, but need not be. Locations of surface-water stations are shown in Figures 5 and 7-13.

By contrast, partial records are obtained through discrete measurements without using a continuous stage-recording device and pertain only to a few flow characteristics, or perhaps only one. Records of miscellaneous discharge measurements or of measurements from special studies, such as low-flow seepage studies, may be considered as partial records, but they are presented separately in this report.

### Data Collection and Computation

The data collected at gaging stations consist of records of stage and measurements of discharge of streams or canals, and stage, surface area, and contents of lakes or reservoirs. In addition, observations of factors affecting the stage-discharge relation or the stage-capacity relation, weather records, and other information are used to supplement base data in determining the daily flow or volume of water in storage. Records of stage are obtained from electronic retrieval of data via satellite from a data-collection platform at the gaging station, direct readings on a non-recording gage, or from a water-stage recorder that gives either an electronically stored value, a continuous graph of the fluctuations, or a tape punched at selected time intervals. Measurements of discharge are made with a current meter, using the general methods adopted by the U.S. Geological Survey. These methods are described in standard textbooks, U.S. Geological Survey Water-Supply Paper 2175, and the U.S. Geological Survey Techniques of Water-Resources Investigations (TWRI's) Book 3, Chapter A1 through A19 and Book 8, Chapters A2 and B2. The methods are consistent with the American Society for Testing and Materials (ASTM) standards and generally follow the standards of the International Organization for Standards (ISO).

For stream-gaging stations, rating tables giving the discharge for any stage are prepared from stage-discharge-relation curves. If extensions to the rating curves are necessary to express discharge greater than measured, they are made on the basis of indirect measurements of peak discharge (such as slope-area or contracted-opening measurements; computation of flow over dams or weirs), step-backwater techniques, velocity-area studies, and logarithmic plotting. The daily mean discharge is computed from gage heights and rating tables, then the monthly and yearly mean discharges are computed from the daily figures. If the stage-discharge relation is subject to change because of frequent or continual change in the physical features that form the control, the daily mean discharge is computed by the shifting-control method, in which correction factors based on individual discharge measurements and notes by engineers and observers are used in applying the gage heights to the rating tables. If the stage-discharge relation for a station is temporarily changed by the presence of aquatic growth or debris on the control, the daily mean discharge is computed by what is basically the shifting-control method.

At some gaging stations, acoustic velocity meter (AVM) systems are used to compute discharge. The AVM system measures the stream's velocity at one or more paths in the cross section. Coefficients are developed to relate this path velocity to the mean velocity in the



cross section. Because the AVM sensors are fixed in position, the adjustment coefficients generally vary with stage. Cross-sectional area curves are developed to relate stage, recorded as noted above, to cross-section area. Discharge is computed by multiplying path velocity by the appropriate stage related coefficient and area.

At some stream-gaging stations, the stage-discharge relation is affected by the backwater from reservoirs, tributary streams, or other sources. This necessitates the use of the slope method in which the slope or fall in a reach of the stream is a factor in computing discharge. The slope or fall is obtained by means of an auxiliary gage set at some distance from the base gage. At some stations the stage-discharge relation is affected by changing stage; at these stations the rate of change in stage is used as a factor in computing discharge.

At some stream-gaging stations, the stage-discharge relation is affected by ice in the winter and it becomes impossible to compute the discharge in the usual manner. Discharge for period of ice effect is computed on the basis of gage-height record and occasional winter discharge measurements. Consideration is given to the available information on temperature and precipitation, notes by gage observers and hydrologists, and comparable records of discharge for other stations in the same or nearby basins.

For a lake or reservoir, capacity tables giving the contents for any stage are prepared from stage-area relation curves defined by surveys. The application of the stage to the capacity table gives the contents, from which the daily, monthly, or yearly change in contents is computed.

If the stage-capacity curve is subject to changes because of deposition of sediment in the reservoir, periodic resurveys of the reservoir are necessary to define new stage-capacity curves. During the period between reservoir surveys, the computed contents may be increasingly in error due to the gradual accumulation of sediment.

For some gaging stations there are periods when no gage-height record is obtained or the recorded gage height is so faulty that it cannot be used to compute daily discharge or contents. This happens when the recorder stops or otherwise fails to operate properly, intakes are plugged, the float is frozen in the well, or for various other reasons. For such periods the daily discharges are estimated on the basis of recorded range in stage, prior and subsequent records, discharge measurements, weather records, and comparison with records for other stations in the same or nearby basins. Likewise daily contents may be estimated on the basis of operator's log, prior and subsequent records, inflow-outflow studies, and other information.

## Data Presentation

Streamflow data in this report are presented in a new format that is considerably different from the format in data reports prior to the 1991 water year. The major changes are that statistical characteristics of discharge now appear in tabular summaries following the water-year data table and less information is provided in the text or station manuscript above the table. These changes represent the results of a pilot program to reformat the annual water-data report to meet current user needs and data preferences.

The records published for each continuous-record surface-water discharge station (gaging station) now consist of four parts: the manuscript or station description; the data table of daily mean values of discharge for the current water year with summary data; a tabular statistical summary of monthly mean flow data for a designated period, by water year; and a summary statistics table that includes statistical data of annual, daily, and instantaneous flows as well as data pertaining to annual runoff, 7-day low-flow minimums, and flow duration.

### Station manuscript

The manuscript provides, under various headings, descriptive information, such as station location; period of record; historical extremes outside the period of record; record accuracy; and other remarks pertinent to station operation and regulation. The following information, as appropriate, is provided with each continuous record of discharge or lake content. Comments to follow clarify information presented under the various headings of the station description.

LOCATION.--Information on locations is obtained from the most accurate maps available. The location of the gaging station with respect to the cultural and physical features in the vicinity and with respect to the reference place mentioned in the station name is given. River mileages, given for only a few stations, were determined by methods given in "River Mileage Measurement," Bulletin 14, Revision of October 1968, prepared by the Water Resources Council or were provided by the U.S. Army Corps of Engineers.

DRAINAGE AREA.--Drainage areas are measured using the most accurate maps available. Because the type of maps available varies from one drainage basin to another, the accuracy of drainage areas likewise varies. Drainage areas are updated as better maps become available.

PERIOD OF RECORD.--This indicates the period for which records have been published for the station or for an equivalent station. An equivalent station is one that was in operation

at a time that the present station was not and whose location was such that flow at it can reasonably be considered equivalent to flow at the present station.

REVISED RECORDS.--Because of new information, published records occasionally are found to be incorrect, and revisions are printed in later reports. Listed under this heading are all the reports in which revisions have been published for the station and the water years to which the revisions apply. If a revision did not include daily, monthly, or annual figures of discharge, that fact is noted after the year dates as follows: "(M)" means that only the instantaneous maximum discharge was revised; "(m)" that only the instantaneous minimum was revised; and "(P)" that only peak discharges were revised. If the drainage area has been revised, the report in which the most recently revised figure was first published is given.

GAGE.--The type of gage in current use, the datum of the current gage referred to National Geodetic Vertical Datum of 1929 (see "DEFINITION OF TERMS" section), and a condensed history of the types, locations, and datums of previous gages are given under this heading.

REMARKS.--All periods of estimated daily discharge will either be identified by date in this paragraph of the station description for water-discharge stations or flagged in the daily discharge table. (See next section, "IDENTIFYING ESTIMATED DAILY DISCHARGE.") If a "REMARKS" paragraph is used to identify estimated record, the paragraph will begin with this information presented as the first entry. The paragraph also is used to present information relative to the accuracy of the records, to special methods of computation, and to conditions that affect natural flow at the station. In addition, information may be presented pertaining to average discharge data for the period of record; to extremes data for the period of record and the current year; and, possibly, to other pertinent items. For reservoir stations, information is given on the dam forming the reservoir, the capacity, outlet works and spillway, and purpose and use of the reservoir.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES OUTSIDE PERIOD OF RECORD.--Included here is information concerning major floods or unusually low flows that occurred outside the stated period of record. The information may or may not have been obtained by the U.S. Geological Survey.

REVISIONS.--If a critical error in published records is discovered, a revision is included in the first report published following discovery of the error.

Although rare, occasionally the records of a discontinued gaging station may need revision. Because, for these stations, there would be no current or, possibly, future station manuscript published to document the revision in a "REVISED RECORDS" entry, users of data for these stations who obtained the record from previously published data reports may wish to contact the District Office (address given on the back of the title page of this report) to determine if the published records were ever revised after the station was discontinued. Of course, if the data for a discontinued station were obtained by computer retrieval, the data would be current and there would be no need to check because any published revision of data is always accompanied by revision of the corresponding data in computer storage.

Manuscript information for lake or reservoir stations differs from that for stream stations in the nature of the "REMARKS" and in the inclusion of a skeleton stage-capacity table when daily contents are given.

Headings for "AVERAGE DISCHARGE", "EXTREMES FOR PERIOD OF RECORD", and "EXTREMES FOR CURRENT YEAR" have been deleted and the information contained in these paragraphs, except for the listing of secondary instantaneous peak discharges in the "EXTREMES FOR CURRENT YEAR" paragraph, is now presented in the tabular summaries following the discharge table or in the "REMARKS" paragraph, as appropriate. No changes have been made to the data presentation of lake contents.

#### Data table of daily mean values

The daily table of discharge records for stream-gaging stations gives mean discharge for each day of the water year. In the monthly summary for the table, the line headed "MEAN" gives the average flow in cubic feet per second for the month; and the lines headed "MAX" and "MIN" give the maximum and minimum daily mean discharges, respectively, for each month. Discharge for the month also is usually expressed in cubic feet per second per square mile (line headed "CFSM"); or in inches (line headed "IN."). The figure for cubic feet per second per square mile and runoff in inches may be omitted if there is extensive regulation or diversion or if the drainage area includes large noncontributing areas. At some stations monthly and (or) yearly observed discharges are adjusted for reservoir storage or diversion, or diversion data or reservoir contents are given. These figures are identified by a symbol and corresponding footnote.

### Statistics of monthly mean data

A tabular summary of the mean (line headed "MEAN"), maximum (line headed "MAX"), and minimum (line headed "MIN") of monthly mean flows for each month for a designated period is provided below the mean values table. The water years of the first occurrence of the maximum and minimum monthly flows are provided immediately below those figures. The designated period will be expressed as "FOR PERIOD OF RECORD, BY WATER YEAR (WY)," and will list the first and last water years of the range of years selected from the "PERIOD OF RECORD" paragraph in the station manuscript. It will consist of all of the station record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript.

### Summary statistics

A table titled "SUMMARY STATISTICS" follows the statistics of monthly mean data tabulation. This table consists of four columns, with the first column containing the line headings of the statistics being reported. The table provides a statistical summary of yearly, daily, and instantaneous flows, not only for the current water year but also for the previous calendar year and for a designated period, as appropriate. The designated period selected, "FOR PERIOD OF RECORD," will consist of all of the stations record within the specified water years, inclusive, including complete months of record for partial water years, if any, and may coincide with the period of record for the station. The water years for which the statistics are computed will be consecutive, unless a break in the station record is indicated in the manuscript. All of the calculations for the statistical characteristics designated "ANNUAL" (see line headings below), except for the "ANNUAL 7-DAY MINIMUM" statistic, are calculated for the designated period using complete water years. The other statistical characteristics may be calculated using partial water years.

The date or water year, as appropriate, of the first occurrence of each statistic reporting extreme values of discharge is provided adjacent to the statistic. Repeated occurrences may be noted in the "REMARKS" paragraph of the manuscript or in footnotes. Because the designated period may not be the same as the station period of record published in the manuscript, occasionally the dates of occurrence listed for the daily and instantaneous extremes in the designated-period column may not be within the selected water years listed in the heading. When this occurs, it will be noted in the "REMARKS" paragraph or in footnotes.

Selected streamflow duration curve statistics and runoff data are also given. Runoff data may be omitted if there is extensive regulation or diversion of flow in the drainage basin.

The following summary statistics data, as appropriate, are provided with each continuous record of discharge. Comments that follow clarify information presented under the various line headings of the summary statistics table.

ANNUAL MEAN.--The arithmetic mean of the individual daily mean discharges for the year noted or for the designated period.

HIGHEST ANNUAL MEAN.--The maximum annual mean discharge occurring for the designated period.

LOWEST ANNUAL MEAN.--The minimum annual mean discharge occurring for the designated period.

HIGHEST DAILY MEAN.--The maximum daily mean discharge for the year or for the designated period.

LOWEST DAILY MEAN.--The minimum daily mean discharge for the year or for the designated period.

ANNUAL 7-DAY MINIMUM.--The lowest mean discharge for 7 consecutive days for a calendar year or a water year. Note that most low-flow frequency analyses of annual 7-day minimum flows use a climatic year (April 1 - March 31). The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day 10-year low-flow statistic.)

MAXIMUM PEAK FLOW.--The maximum instantaneous discharge occurring for the water year or for the designated period. Occasionally the maximum flow for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak flow is given in the table and the maximum flow may be reported in a footnote or in the REMARKS paragraph in the manuscript.

MAXIMUM PEAK STAGE.--The maximum instantaneous stage occurring for the water year or for the designated period. Occasionally the maximum stage for a year may occur at midnight at the beginning or end of the year, on a recession from or rise toward a higher peak in the adjoining year. In this case, the maximum peak stage is given in the table and the maximum stage may be reported in a footnote or

in the REMARKS paragraph in the manuscript. If the dates of occurrence for the instantaneous peak flow and instantaneous peak stage differ, the REMARKS paragraph in the manuscript or a footnote may be used to provide further information.

INSTANTANEOUS LOW FLOW.--The minimum instantaneous discharge occurring for the water year or for the designated period.

ANNUAL RUNOFF.--Indicates the total quantity of water in runoff for a drainage area for the year.

Inches (INCHES) indicates the depth to which the drainage area would be covered if all the runoff for a given time period were uniformly distributed on it.

10 PERCENT EXCEEDS.--The discharge that has been exceeded 10 percent of the time for the designated period.

50 PERCENT EXCEEDS.--The discharge that has been exceeded 50 percent of the time for the designated period.

90 PERCENT EXCEEDS.--The discharge that has been exceeded 90 percent of the time for the designated period.

Data collected at partial-record stations follow the information for continuous-record sites. Data for partial-record discharge stations are presented in two tables. The first is a table of annual maximum stage and discharge at crest-stage stations, and the second is a table of discharge measurements at low-flow partial-record stations. The tables of partial-record stations are followed by a listing of discharge measurements made at sites other than continuous-record or partial-record stations. These measurements generally are made in times of drought or flood to give better areal coverage to those events. Those measurements and others collected for some special reason are called measurements at miscellaneous sites.

#### Identifying Estimated Daily Discharge

Estimated daily-discharge values published in the water-discharge tables of annual State data reports are identified either by flagging individual daily value with the letter symbol "e" and printing a table footnote, "e Estimated", or by listing the dates of the estimated record in the "REMARKS" paragraph of the station description.

#### Accuracy of Data and Computed Results

The accuracy of streamflow data depends primarily on (1) the stability of the stage-

discharge relation or, if the control is unstable, the frequency of discharge measurements, and (2) the accuracy of observations of stage, measurements of discharge, and interpretations of records.

The station description under "REMARKS" states the degree of accuracy of the records. "Excellent" means that about 95 percent of the daily discharges are within 5 percent; "good", within 10 percent; and "fair", within 15 percent. "Poor" means that daily discharges have less than "fair" accuracy.

Figures of daily mean discharge in this report are shown to the nearest hundredth of a cubic foot per second for discharge of less than 1.0 cubic foot per second; to tenths between 1.0 and 10 cubic feet per second; to whole numbers between 10 and 1,000 cubic feet per second; and to three significant figures above 1,000 cubic feet per second. The number of significant figures used is based solely on the magnitude of the figure. The same rounding rules apply to discharge figures listed for partial-record stations.

Discharge at many stations, as indicated by the monthly mean, may not reflect natural runoff due to the effects of diversion, consumption, regulation by storage, increase or decrease in evaporation due to artificial causes, or to other factors. For such stations, figures of runoff in inches are not published unless satisfactory adjustments can be made for diversions, for changes in contents of reservoirs, or for other changes incident to use and control. Evaporation from a reservoir is not included in the adjustments for changes in reservoir contents, unless it is so stated. Even at those stations where adjustments are made, large errors in computed runoff may occur if adjustments or losses are large in comparison with the observed discharge.

#### Other Data Available

Information of a more detailed nature than that published for most of the gaging stations, such as observations of water temperatures, discharge measurements, gage-height records, and rating tables, is on file in the District Office. Also most gaging-station records are available in computer-usable form and many statistical analyses have been made.

Information on the availability of unpublished data or statistical analyses may be obtained from the District Office.

The National Water Data Exchange, Water Resources Division, U.S. Geological Survey, National Center, Reston, VA 22092, maintains an index of all discharge measurement sites in the State as well as an index of records of discharge

collected by other agencies but not published by the U.S. Geological Survey. Information on records available at specific sites can be obtained upon request.

#### Records of Surface-Water Quality

Records of surface-water quality ordinarily are obtained at or near stream-gaging stations because interpretation of records of surface-water quality nearly always require corresponding discharge data. Records of surface-water quality in this report may involve a variety of types of data and measurement frequencies.

#### Classification of Records

Water-quality data for surface-water sites are grouped into one of three classifications. A continuing-record station is a site where data are collected on a regularly scheduled basis. Frequency may be one or more times daily, weekly, monthly, or quarterly. A partial-record station is a site where limited water-quality data are collected systematically over a period of years. Frequency of sampling is usually less than quarterly. A miscellaneous sampling site is a location other than a continuing or partial-record station, where random samples are collected to give better areal coverage to define water-quality conditions in the river basin.

A careful distinction needs to be made between "continuing records" as used in this report and "continuous recordings," which refers to a continuous graph or a series of discrete values punched at short intervals on a paper tape. Some records of water quality, such as temperature and specific conductance, may be obtained through continuous recordings; however, because of costs, most data are obtained only monthly or less frequently. Locations of surface-water-quality stations are shown in Figures 6-13.

#### Arrangement of Records

Water-quality records collected at a surface-water daily record station are published immediately following that record, regardless of the frequency or sample collection. Station number and name are the same for both records. Where a surface-water daily record station is not available or where the water quality differs significantly from that at the nearby surface-water station, the continuing water-quality records are published with its own station number and name in the regular downstream-order sequence. Water-quality data for partial-records stations and for miscellaneous sampling sites appear in separate tables following the table of discharge measurements at miscellaneous sites.

#### On-site Measurements and Sample Collection

In obtaining water-quality data, a major concern is ensuring that the data obtained represents the in-situ quality of water. To ensure this, certain measurements, such as water temperature, pH, and dissolved oxygen, need to be made onsite when the samples are taken. To ensure that measurements made in the laboratory also represent the in-situ water, carefully prescribed procedures need to be followed in collecting the samples, in treating the samples to prevent changes in quality pending analysis, and in shipping the samples to the laboratory. Procedures for onsite measurements and for collecting, treating, and shipping samples are given in publications on "Techniques of Water-Resources Investigations," Book 1, Chapter D2; Book 3, Chapter A1, A3, and A4; Book 9, Chapter A1-A9. These references are listed in the "PUBLICATIONS ON TECHNIQUES OF WATER-RESOURCES INVESTIGATIONS OF THE U.S. GEOLOGICAL SURVEY" section of this report. These methods are consistent with the ASTM standards and generally follow ISO standards.

One sample can define adequately the water quality at a given time if the mixture of solutes throughout the stream cross section is homogenous. However, the concentration of solutes at different locations in the cross section may vary widely with different rates of water discharge, depending on the source of material and the turbulence and mixing of the stream. Some streams must be sampled through several vertical sections to obtain a representative sample needed for an accurate mean concentration and for use in calculating load. Chemical-quality data published in this report are considered to be the most representative values available for the stations listed. The values reported represent water-quality conditions at the time of sampling as much as possible, consistent with available sampling techniques and methods of analysis.

For chemical-quality stations equipped with digital monitors, the records consist of daily maximum, minimum, and mean values for each constituent measured and are based upon bi-hourly readings beginning at 0100 hours and ending at 2400 hours for the day of record. More detailed records (hourly values) may be obtained from the District Office.

#### Water Temperature

Water temperatures are measured at most of the water-quality stations. In addition, water temperatures are taken at time of discharge measurements for water-discharge stations. For stations where water temperatures are taken manually once daily, the water temperatures are taken at about the same time each day. Large streams have a small daily temperature change;

shallow streams may have a daily range of several degrees and may follow closely the changes in air temperature. Some streams may be affected by waste-heat discharges.

At stations where recording instruments are used, maximum, minimum, and mean temperatures for each day are published.

#### Sediment

Suspended-sediment concentrations are determined from samples collected by using depth-integrating samplers. Samples usually are obtained at several verticals in the cross section, or a single sample may be obtained at a fixed point and a coefficient applied to determine the mean concentration in the cross sections.

During periods of rapidly changing flow or rapidly changing concentration, samples may have been collected more frequently (twice daily or, in some instances, hourly). The published sediment discharges for days of rapidly changing flow or concentration were computed by the subdivided day method (time-discharge weighted average). Therefore, for those days when the published sediment discharge value differs from the value computed as the product of discharge times mean concentration times 0.0027, the reader can assume that the sediment discharge for that day was computed by the subdivided day method. For periods when no samples were collected, daily loads of suspended sediment were estimated on the basis of water discharge, sediment concentrations measured immediately before and after the periods, and suspended-sediment loads for other periods of similar discharge. Methods used in the computation of sediment records are described in the TWRI Book 3, Chapters C1 and C3. These methods are consistent with ASTM standards and generally follow ISO standards.

The daily suspended-sediment concentrations for the Mississippi River at St. Louis are derived from turbidity readings from the Chain of Rocks Water-Treatment Plant and the Chouteau Island Water-Treatment Plant. Approximately once a week, two depth-integrated verticals are taken to adjust the relation between suspended sediment and turbidity.

#### Laboratory Measurements

Samples for indicator bacteria, specific conductance, pH, temperature, dissolved oxygen, and alkalinity are analyzed locally. All other samples are analyzed in the U.S. Geological Survey laboratories in Arvada, CO, Ocala, FL, and Rolla, MO. Methods used to analyze sediment samples and to compute sediment records are described in the TWRI Book 5, Chapter C1. Methods used by the U.S. Geological Survey laboratories are given in TWRI Book 1, Chapter

D2; Book 3, Chapter C2; and Book 5, Chapters A1, A3, A4, and A5. These methods are consistent with ASTM standards and generally follow ISO standards.

#### Quality Assurance of Water-Quality Data

Quality assurance is a system of activities whose purpose is to produce a product with the assurance that it meets defined standards of quality with a stated level of confidence. A quality assurance program became an integral part of the ambient water-quality monitoring network in fiscal year 1993. The program involved collecting additional samples to measure sampling repeatability, container cleanliness, and equipment cleanliness during regular site visits when environmental samples were being collected. The results of these additional samples are used by the District Water-Quality Specialist to define problem areas and eliminate further contamination of samples and/or improper sampling procedures. A data base of quality-assurance data has been created and contains all quality-assurance data collected within the District. These data can be retrieved by written request through the District Water-Quality Specialist.

#### Data Presentation

For continuing-record stations, information pertinent to the history of station operation is provided in descriptive headings preceding the tabular data. These descriptive headings give details regarding location, drainage area, period of record, type of data available, instrumentation, general remarks, cooperation, and extremes for parameters currently measured daily. Tables of chemical, physical, and biological data obtained at a frequency less than daily are presented first. Tables of "daily values" of specific conductance, pH, water temperature, dissolved, and suspended sediment then follow in sequence.

In the descriptive headings, if the location is identical to that of the discharge gaging station, neither "LOCATION" nor the "DRAINAGE AREA" statements are repeated. The following information, when appropriate, is provided with each continuous-record station. Comments that follow clarify information presented under the various headings of the station description.

LOCATION.--See Data Presentation under "Records of Stage and Water Discharge"; same comments apply.

DRAINAGE AREA.--See Data Presentation under "RECORDS OF STAGE AND WATER DISCHARGE"; same comments apply.

PERIOD OF RECORD.--This indicates the periods for which there are published water-quality records for the station. The periods shown separately for records of parameters measured

daily or continuously and those measured less than daily. For those measured daily or continuously, periods of record are given for the parameters individually.

INSTRUMENTATION.--Information on instrumentation is given only if a water-quality monitor, temperature recorder, sediment pumping sampler, or other sampling device is in operation at a station.

REMARKS.--Remarks provide added information pertinent to the collection, analysis, or computation of the records.

COOPERATION.--Records provided by a cooperating organization or obtained for the U.S. Geological Survey by a cooperating organization are identified here.

EXTREMES.--Maximums and minimums are given only for parameters measured daily or more frequently. None are given for parameters measured weekly or less frequently, because the true maximums or minimums may not have been sampled. Extremes, when given, are provided for both the period of record and for the current water year.

REVISIONS.--If errors in published water-quality records are discovered after publication, appropriate updates are made in the U.S. Geological Survey's distributed data system, NWIS, and subsequently to its web-based National data system, NWISWeb [<http://water.usgs.gov/nwis/nwis>]. Because the usual volume of updates makes it impractical to document individual changes in the State data-report series or elsewhere, potential users of U.S. Geological Survey water-quality data are encouraged to obtain all required data from NWIS or NWISWeb to ensure the most recent updates. Updates to NWISWEB are currently made on an annual basis.

#### Remark Codes

The following remark codes may appear with the water-quality data in this report.

<u>PRINTED OUTPUT</u>	<u>REMARK</u>
<	Numeric result is less than the value shown.
K	Results based on colony count outside the acceptable range (non-ideal colony count).
E	Laboratory estimated value.
LA	Laboratory accident.
M	Presence of material verified, but not quantified.
e	Estimated discharge value.
L	Laboratory value.

\*NOTE.--The National Water Quality Laboratory uses the E remark code in two cases. First, the code is used for reporting values less than the method detection limit (MDL) when the analyte has been conclusively identified. Second, the code is used for reporting values greater than the MDL when the value is substantially more uncertain than for other analytes.

#### Dissolved Trace-Element Concentrations

Traditionally, dissolved trace-element concentrations have been reported at the microgram per liter ( $\mu\text{g/L}$ ) level. Recent evidence, mostly from large rivers, indicates that actual dissolved-phase concentrations for a number of trace elements are within the range of 10's to 100's of nanograms per liter ( $\text{ng/L}$ ). Data above the  $\text{mg/L}$  level should be viewed with caution. Such data may actually represent elevated environmental concentrations from natural or human causes; however, these data could reflect contamination introduced during sampling, processing, or analysis. To confidently produce dissolved trace-element data with insignificant contamination, the U.S. Geological Survey began using new trace-element protocols at most stations in water year 1994.

#### Water Quality-Control Data

Data generated from quality-control (QC) samples are a requisite for evaluating the quality of the sampling and processing techniques as well as data from the actual samples themselves. Without QC data, environmental sample data cannot be adequately interpreted because the errors associated with the sample data are unknown. The various types of QC samples collected by this district are described in the following section. Procedures have been established for the storage of water-quality-control data within the USGS. These procedures allow for storage of all derived QC data and are identified so that they can be related to corresponding environmental samples.

#### Blank Samples

Blank samples are collected and analyzed to ensure that environmental samples have not been contaminated by the overall data-collection process. The blank solution used to develop specific types of blank samples is a solution that is free of the analytes of interest. Any measured value signal in a blank sample for an analyte (a specific component measured in a chemical analysis) that was absent in the blank

solution is believed to be due to contamination. There are many types of blank samples possible, each designed to segregate a different part of the overall data-collection process. The types of blank samples collected in this district are:

Field blank - a blank solution that is subjected to all aspects of sample collection, field processing preservation, transportation, and laboratory handling as an environmental sample.

Trip blank - a blank solution that is put in the same type of bottle used for an environmental sample and kept with the set of sample bottles before and after sample collection.

Equipment blank - a blank solution that is processed through all equipment used for collecting and processing an environmental sample (similar to a field blank but normally done in the more controlled conditions of the office).

Sampler blank - a blank solution that is poured or pumped through the same field sampler used for collecting an environmental sample.

Filter blank - a blank solution that is filtered in the same manner and through the same filter apparatus used for an environmental sample.

Splitter blank - a blank solution that is mixed and separated using a field splitter in the same manner and through the same apparatus used for an environmental sample.

Preservation blank - a blank solution that is treated with the sampler preservatives used for an environmental sample.

#### Reference Samples

Reference material is a solution or material prepared by a laboratory whose composition is certified for one or more properties so that it can be used to assess a measurement method. Samples of reference material are submitted for analysis to ensure that an analytical method is accurate for the known properties of the reference material. Generally, the selected reference material properties are similar to the environmental sample properties.

#### Replicate Samples

Replicate samples are a set of environmental samples collected in a manner such that the samples are thought to be essentially identical in composition. Replicate is the general case for which duplicate is the special case consisting of two samples. Replicate samples are collected and analyzed to establish the amount of variability in the data contributed by some part of the collection and analytical process. There are many types of replicate samples possible, each of which may yield slightly different results in a dynamic hydrologic setting, such as a flowing stream. The types of replicate samples collected in this district are:

Sequential samples - a type of replicate sample in which the samples are collected one after the other, typically over a short time.

Split sample - a type of replicate sample in which a sample is split into subsamples contemporaneous in time and space.

#### Spike Samples

Spike samples are samples to which known quantities of a solution with one or more well-established analyte concentrations have been added. These samples are analyzed to determine the extent of matrix interference or degradation on the analyte concentration during sample processing and analysis.

#### ACCESS TO USGS WATER DATA

The USGS provides near real-time stage and discharge data for many of the gaging stations equipped with the necessary telemetry and historic daily-mean and peak-flow discharge data for most current or discontinued gaging stations through the world wide web (WWW). These data may be accessed at:

<http://waterdata.usgs.gov>

Some water-quality and ground-water data also are available through the WWW at the above address. In addition, data can be provided on 3-1/2 inch floppy disk. Information about the availability of specific types of data or products, and user charges, can be obtained locally from each of the Water Resources Division District Offices (See address on the back of the title page.)



## DEFINITION OF TERMS

Specialized technical terms related to streamflow, water-quality, and other hydrologic data, as used in this report, are defined below. Definitions of common terms such as algae, water level, and precipitation are given in standard dictionaries. Not all terms defined in this alphabetical list apply to every State. See also table for converting inch/pound units to International System (SI) units on the inside of the back cover.

**Acid neutralizing capacity** (ANC) is the equivalent sum of all bases or base-producing materials, solutes plus particulates, in an aqueous system that can be titrated with acid to an equivalence point. This term designates titration of an "unfiltered" sample (formerly reported as alkalinity).

**Acre-foot** (AC-FT, acre-ft) is a unit of volume, commonly used to measure quantities of water used or stored, equivalent to the volume of water required to cover 1 acre to a depth of 1 foot and equivalent to 43,560 cubic feet, 325,851 gallons, or 1,233 cubic meters. (See also "Annual runoff")

**Adenosine triphosphate** (ATP) is an organic, phosphate-rich compound important in the transfer of energy in organisms. Its central role in living cells makes ATP an excellent indicator of the presence of living material in water. A measurement of ATP therefore provides a sensitive and rapid estimate of biomass. ATP is reported in micrograms per liter.

**Algal growth potential** (AGP) is the maximum algal dry weight biomass that can be produced in a natural water sample under standardized laboratory conditions. The growth potential is the algal biomass present at stationary phase and is expressed as milligrams dry weight of algae produced per liter of sample. (See also "Biomass" and "Dry weight")

**Alkalinity** is the capacity of solutes in an aqueous system to neutralize acid. This term designates titration of a "filtered" sample.

**Annual runoff** is the total quantity of water that is discharged ("runs off") from a drainage basin in a year. Data reports may present annual runoff data as volumes in acre-feet, as discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches.

**Annual 7-day minimum** is the lowest mean value for any 7-consecutive-day period in a year. Annual 7-day minimum values are reported herein for the calendar year and the water year (October 1 through September 30). Most low-flow frequency analyses use a climatic year (April 1-March 31), which tends to prevent the low-flow period from being artificially split between adjacent years. The date shown in the summary statistics table is the initial date of the 7-day period. (This value should not be confused with the 7-day, 10-year low-flow statistic.)

**Aroclor** is the registered trademark for a group of poly-chlorinated biphenyls that were manufactured by the Monsanto Company prior to 1976. Aroclors are assigned specific 4-digit reference numbers dependent upon molecular type and degree of substitution of the biphenyl ring hydrogen atoms by chlorine atoms. The first two digits of a numbered aroclor represent the molecular type, and the last two digits represent the percentage weight of the hydrogen-substituted chlorine.

**Artificial substrate** is a device that is purposely placed in a stream or lake for colonization of organisms. The artificial substrate simplifies the community structure by standardizing the substrate from which each sample is collected. Examples of artificial substrates are basket samplers (made of wire cages filled with clean streamside rocks) and multiplate samplers (made of hardboard) for benthic organism collection, and plexiglass strips for periphyton collection. (See also "Substrate")

**Ash mass** is the mass or amount of residue present after the residue from the dry mass determination has been ashed in a muffle furnace at a temperature of 500 °C for 1 hour. Ash mass of zooplankton and phytoplankton is expressed in grams per cubic meter ( $\text{g/m}^3$ ), and periphyton and benthic organisms in grams per square meter ( $\text{g/m}^2$ ). (See also "Biomass" and "Dry mass")

**Aspect** is the direction toward which a slope faces with respect to the compass.

**Bacteria** are microscopic unicellular organisms, typically spherical, rodlike, or spiral and threadlike in shape, often clumped into colonies. Some bacteria cause disease, whereas others perform an essential role in nature in the recycling of materials; for example, by decomposing organic matter into a form available for reuse by plants.

**Bankfull stage**, as used in this report, is the stage at which a stream first overflows its natural banks formed by floods with 1- to 3-year recurrence intervals.

**Base discharge** (for peak discharge) is a discharge value, determined for selected stations, above which peak discharge data are published. The base discharge at each station is selected so that an average of about three peak flows per year will be published. (See also "Peak flow")

**Base flow** is sustained flow of a stream in the absence of direct runoff. It includes natural and human-induced streamflows. Natural base flow is sustained largely by ground-water discharge.

**Bedload** is material in transport that is supported primarily by the streambed. In this report, bedload is considered to consist of particles in transit from the bed to an elevation equal to the top of the bedload sampler nozzle (ranging from 0.25 to 0.5 foot) that are retained in the bedload sampler. A sample collected with a pressure-differential bedload sampler also may contain a component of the suspended load.

**Bedload discharge** (tons per day) is the rate of sediment moving as bedload, reported as dry weight, that passes through a cross section in a given time. NOTE: Bedload discharge values in this report may include a component of the suspended-sediment discharge. A correction may be necessary when computing the total sediment discharge by summing the bedload discharge and the suspended-sediment discharge. (See also "Bedload," "Dry weight," "Sediment," and "Suspended-sediment discharge")

**Bed material** is the sediment mixture of which a stream-bed, lake, pond, reservoir, or estuary bottom is composed. (See also "Bedload" and "Sediment")

**Benthic organisms** are the group of organisms inhabiting the bottom of an aquatic environment. They include a number of types of organisms, such as bacteria, fungi, insect larvae and nymphs, snails, clams, and crayfish. They are useful as indicators of water quality.

**Biochemical oxygen demand** (BOD) is a measure of the quantity of dissolved oxygen, in milligrams per liter, necessary for the decomposition of organic matter by microorganisms, such as bacteria.

**Biomass** is the amount of living matter present at any given time, expressed as mass per unit area or volume of habitat.

**Biomass pigment ratio** is an indicator of the total proportion of periphyton that are autotrophic (plants). This is also called the Autotrophic Index.

**Blue-green algae** (Cyanophyta) are a group of phytoplankton organisms having a blue pigment, in addition to the green pigment called chlorophyll. Blue-green algae often cause nuisance conditions in water. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Bottom material** (See "Bed material")

**Bulk electrical conductivity** is the combined electrical conductivity of all material within a doughnut-shaped volume surrounding an induction probe. Bulk conductivity is affected by different physical and chemical properties of the material including the dissolved solids content of the pore water and lithology and porosity of the rock.

**Cells/volume** refers to the number of cells of any organism that is counted by using a microscope and grid or counting cell. Many planktonic organisms are multicelled and are counted according to the number of contained cells per sample volume, and are generally reported as cells or units per milliliter (mL) or liter (L).

**Cells volume** (biovolume) determination is one of several common methods used to estimate biomass of algae in aquatic systems. Cell members of algae are frequently used in aquatic surveys as an indicator of algal production. However, cell numbers alone cannot represent true biomass because of considerable cell-size variation among the algal species. Cell volume ( $\mu\text{m}^3$ ) is determined by obtaining critical cell measurements or cell dimensions (for example, length, width, height, or radius) for 20 to 50 cells of each important species to obtain an average biovolume per cell. Cells are categorized according to the correspondence of their cellular shape to the nearest geometric solid or combinations of simple solids (for example, spheres, cones, or cylinders). Representative formulae used to compute biovolume are as follows:

sphere  $\frac{4}{3} \pi r^3$  cone  $\frac{1}{3} \pi r^2 h$  cylinder  $\pi r^2 h$ .

$\pi$  ( $\pi$ ) is the ratio of the circumference to the diameter of a circle;  $\pi = 3.14159\dots$

From cell volume, total algal biomass expressed as biovolume ( $\mu\text{m}^3/\text{mL}$ ) is thus determined by multiplying the number of cells of a given species by its average cell volume and then summing these volumes for all species.

**Cfs-day** (See "Cubic foot per second-day")

**Channel bars**, as used in this report, are the lowest prominent geomorphic features higher than the channel bed.

**Chemical oxygen demand** (COD) is a measure of the chemically oxidizable material in the water and furnishes an approximation of the amount of organic and reducing material present. The determined value may correlate with BOD or with carbonaceous organic pollution from sewage or industrial wastes. [See also "Biochemical oxygen demand (BOD)"]

***Clostridium perfringens*** (*C. perfringens*) is a spore-forming bacterium that is common in the feces of human and other warmblooded animals. Clostridial spores are being used experimentally as an indicator of past fecal contamination and presence of microorganisms that are resistant to disinfection and environmental stresses. (See also "Bacteria")

**Coliphages** are viruses that infect and replicate in coliform bacteria. They are indicative of sewage contamination of water and of the survival and transport of viruses in the environment.

**Color unit** is produced by 1 milligram per liter of platinum in the form of the chloroplatinate ion. Color is expressed in units of the platinum-cobalt scale.

**Confined aquifer** is a term used to describe an aquifer containing water between two relatively impermeable boundaries. The water level in a well tapping a confined aquifer stands above the top of the confined aquifer and can be higher or lower than the water table that may be present in the material above it. In some cases, the water level can rise above the ground surface, yielding a flowing well.

**Contents** is the volume of water in a reservoir or lake. Unless otherwise indicated, volume is computed on the basis of a level pool and does not include bank storage.

**Continuous-record station** is a site where data are collected with sufficient frequency to define daily mean values and variations within a day.

**Control** designates a feature in the channel that physically affects the water-surface elevation and thereby determines the stage-discharge relation at the gage. This feature may be a constriction of the channel, a bed-rock outcrop, a gravel bar, an artificial structure, or a uniform cross section over a long reach of the channel.

**Control structure**, as used in this report, is a structure on a stream or canal that is used to regulate the flow or stage of the stream or to prevent the intrusion of saltwater.

**Cubic foot per second** (CFS,  $\text{ft}^3/\text{s}$ ) is the rate of discharge representing a volume of 1 cubic foot passing a given point in 1 second. It is equivalent to approximately 7.48 gallons per second or approximately 449 gallons per minute, or 0.02832 cubic meters per second. The term "second-foot" sometimes is used synonymously with "cubic foot per second" but is now obsolete.

**Cubic foot per second-day** (CFS-DAY, Cfs-day,  $[(\text{ft}^3/\text{s})/\text{d}]$ ) is the volume of water represented by a flow of 1 cubic foot per second for 24 hours. It is equivalent to 86,400 cubic feet, 1.98347 acre-feet, 646,317 gallons, or 2,446.6 cubic meters. The daily mean discharges reported in the daily value data tables are numerically equal to the daily volumes in cfs-days, and the totals also represent volumes in cfs-days.

**Cubic foot per second per square mile** [CFSM,  $(\text{ft}^3/\text{s})/\text{mi}^2$ ] is the average number of cubic feet of water flowing per second from each square mile of area drained, assuming the runoff is distributed uniformly in time and area. (See also "Annual runoff")

**Daily mean suspended-sediment concentration** is the time-weighted concentration of suspended sediment passing a stream cross section during a 24-hour day. (See also "Sediment" and "Suspended-sediment concentration")

**Daily-record station** is a site where data are collected with sufficient frequency to develop a record of one or more data values per day. The frequency of data collection can range from continuous recording to periodic sample or data collection on a daily or near-daily basis.

**Data collection platform** (DCP) is an electronic instrument that collects, processes, and stores data from various sensors, and transmits the data by satellite data relay, line-of-sight radio, and/or landline telemetry.

**Data logger** is a microprocessor-based data acquisition system designed specifically to acquire, process, and store data. Data are usually downloaded from onsite data loggers for entry into office data systems.

**Datum** is a surface or point relative to which measurements of height and/or horizontal position are reported. A vertical datum is a horizontal surface used as the zero point for measurements of gage height, stage, or elevation; a horizontal datum is a reference for positions given in terms of latitude-longitude, State Plane coordinates, or UTM coordinates. (See also "Gage datum," "Land-surface datum," "National Geodetic Vertical Datum of 1929," and "North American Vertical Datum of 1988")

**Diatoms** are the unicellular or colonial algae having a siliceous shell. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Diel** is of or pertaining to a 24-hour period of time; a regular daily cycle.

**Discharge**, or **flow**, is the rate that matter passes through a cross section of a stream channel or other water body per unit of time. The term commonly refers to the volume of water (including, unless otherwise stated, any sediment or other constituents suspended or dissolved in the water) that passes a cross section in a stream channel, canal, pipeline, etc., within a given period of time (cubic feet per second). Discharge also can apply to the rate at which constituents, such as suspended sediment, bedload, and dissolved or suspended chemicals, pass through a cross section, in which cases the quantity is expressed as the mass of constituent that passes the cross section in a given period of time (tons per day).

**Dissolved** refers to that material in a representative water sample that passes through a 0.45-micrometer membrane filter. This is a convenient operational definition used by Federal and State agencies that collect water-quality data. Determinations of "dissolved" constituent concentrations are made on sample water that has been filtered.

**Dissolved oxygen** (DO) is the molecular oxygen (oxygen gas) dissolved in water. The concentration in water is a function of atmospheric pressure, temperature, and dissolved-solids concentration of the water. The ability of water to retain oxygen decreases with increasing temperature or dissolved-solids concentration. Photosynthesis and respiration by plants commonly cause diurnal variations in dissolved-oxygen concentration in water from some streams.

**Dissolved-solids concentration** in water is the quantity of dissolved material in a sample of water. It is determined either analytically by the "residue-on-evaporation" method, or mathematically by totaling the concentrations of individual constituents reported in a comprehensive chemical analysis. During the analytical determination, the bicarbonate (generally a major dissolved component of water) is converted to carbonate. In the mathematical calculation, the bicarbonate value, in milligrams per liter, is multiplied by 0.4926 to convert it to carbonate. Alternatively, alkalinity concentration (as mg/L  $\text{CaCO}_3$ ) can be converted to carbonate concentration by multiplying by 0.60.

**Diversity index** (H) (Shannon index) is a numerical expression of evenness of distribution of aquatic organisms. The formula for diversity index is:

$$\bar{d} = -\sum_{i=1}^s \frac{n_i}{n} \log_2 \frac{n_i}{n}$$

where  $n_i$  is the number of individuals per taxon,  $n$  is the total number of individuals, and  $s$  is the total number of taxa in the sample of the community. Index values range from zero, when all the organisms in the sample are the same, to some positive number, when some or all of the organisms in the sample are different.

**Drainage area** of a stream at a specific location is that area upstream from the location, measured in a horizontal plane, that has a common outlet at the site for its surface runoff from precipitation that normally drains by gravity into a stream. Drainage areas given herein include all closed basins, or noncontributing areas, within the area unless otherwise specified.

**Drainage basin** is a part of the Earth's surface that contains a drainage system with a common outlet for its surface runoff. (See "Drainage area")

**Dry mass** refers to the mass of residue present after drying in an oven at 105 °C, until the mass remains unchanged. This mass represents the total organic matter, ash and sediment, in the sample. Dry-mass values are expressed in the same units as ash mass. (See also "Ash mass," "Biomass," and "Wet mass")

**Dry weight** refers to the weight of animal tissue after it has been dried in an oven at 65 °C until a constant weight is achieved. Dry weight represents total organic and inorganic matter in the tissue. (See also "Wet weight")

**Embeddedness** is the degree to which gravel-sized and larger particles are surrounded or enclosed by finer-sized particles. (See also "Substrate embeddedness class")

**Enterococcus bacteria** are commonly found in the feces of humans and other warmblooded animals. Although some strains are ubiquitous and not related to fecal pollution, the presence of enterococci in water is an indication of fecal pollution and the possible presence of enteric pathogens. Enterococcus bacteria are those bacteria that produce pink to red colonies with black or reddish-brown precipitate after incubation at 41 °C on m-E agar (nutrient medium for bacterial growth) and subsequent transfer to EIA medium. Enterococci include *Streptococcus faecalis*, *Streptococcus faecium*, *Streptococcus avium*, and their variants. (See also "Bacteria")

**EPT Index** is the total number of distinct taxa within the insect orders Ephemeroptera, Plecoptera, and Trichoptera. This index summarizes the taxa richness within the aquatic insects that are generally considered pollution sensitive; the index usually decreases with pollution.

***Escherichia coli* (*E. coli*)** are bacteria present in the intestine and feces of warmblooded animals. *E. coli* are a member species of the fecal coliform group of indicator bacteria. In the laboratory, they are defined as those bacteria that produce yellow or yellow-brown colonies on a filter pad saturated with urea substrate broth after primary culturing for 22 to 24 hours at 44.5 °C on m-TEC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Estimated (E) concentration value** is reported when an analyte is detected and all criteria for a positive result are met. If the concentration is less than the method detection limit (MDL), an "E" code will be reported with the value. If the analyte is qualitatively identified as present, but the quantitative determination is substantially more uncertain, the National Water Quality Laboratory will identify the result with an "E" code even though the measured value is greater than the MDL. A value reported with an "E" code should be used with caution. When no analyte is detected in a sample, the default reporting value is the MDL preceded by a less than sign (<).

**Euglenoids (*Euglenophyta*)** are a group of algae that are usually free-swimming and rarely creeping. They have the ability to grow either photosynthetically in the light or heterotrophically in the dark. (See also "Phytoplankton")

**Extractable organic halides (EOX)** are organic compounds that contain halogen atoms such as chlorine. These organic compounds are semi-volatile and extractable by ethyl acetate from air-dried streambed sediment. The ethyl acetate extract is combusted, and the concentration is determined by microcoulometric determination of the halides formed. The concentration is reported as micrograms of chlorine per gram of the dry weight of the streambed sediment.

**Fecal coliform bacteria** are present in the intestines or feces of warmblooded animals. They often are used as indicators of the sanitary quality of the water. In the laboratory, they are defined as all organisms that produce blue colonies within 24 hours when incubated at 44.5 °C plus or minus 0.2 °C on m-FC medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fecal streptococcal bacteria** are present in the intestines of warmblooded animals and are ubiquitous in the environment. They are characterized as gram-positive, cocci bacteria that are capable of growth in brain-heart

infusion broth. In the laboratory, they are defined as all the organisms that produce red or pink colonies within 48 hours at 35 °C plus or minus 1.0 °C on KF-streptococcus medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 mL of sample. (See also "Bacteria")

**Fire algae (*Pyrrhophyta*)** are free-swimming unicells characterized by a red pigment spot. (See also "Phytoplankton")

**Flow-duration percentiles** are values on a scale of 100 that indicate the percentage of time for which a flow is not exceeded. For example, the 90th percentile of river flow is greater than or equal to 90 percent of all recorded flow rates.

**Gage datum** is a horizontal surface used as a zero point for measurement of stage or gage height. This surface usually is located slightly below the lowest point of the stream bottom such that the gage height is usually slightly greater than the maximum depth of water. Because the gage datum itself is not an actual physical object, the datum usually is defined by specifying the elevations of permanent reference marks such as bridge abutments and survey monuments, and the gage is set to agree with the reference marks. Gage datum is a local datum that is maintained independently of any national geodetic datum. However, if the elevation of the gage datum relative to the national datum (North American Vertical Datum of 1988 or National Geodetic Vertical Datum of 1929) has been determined, then the gage readings can be converted to elevations above the national datum by adding the elevation of the gage datum to the gage reading.

**Gage height (G.H.)** is the water-surface elevation, in feet above the gage datum. If the water surface is below the gage datum, the gage height is negative. Gage height often is used interchangeably with the more general term "stage," although gage height is more appropriate when used in reference to a reading on a gage.

**Gage values** are values that are recorded, transmitted, and/or computed from a gaging station. Gage values typically are collected at 5-, 15-, 30- or 60-minute intervals.

**Gaging station** is a site on a stream, canal, lake, or reservoir where systematic observations of stage, discharge, or other hydrologic data are obtained.

**Gas chromatography/flame ionization detector (GC/FID)** is a laboratory analytical method used as a screening technique for semivolatile organic compounds that are extractable from water in methylene chloride.

**Geomorphic channel units**, as used in this report, are fluvial geomorphic descriptors of channel shape and stream velocity. Pools, riffles, and runs are types of geomorphic channel units considered for National Water-Quality Assessment (NAWQA) Program habitat sampling.

**Green algae** have chlorophyll pigments similar in color to those of higher green plants. Some forms produce algae mats or floating "moss" in lakes. Their concentrations are expressed as number of cells per milliliter (cells/mL) of sample. (See also "Phytoplankton")

**Habitat**, as used in this report, includes all nonliving (physical) aspects of the aquatic ecosystem, although living components like aquatic macrophytes and riparian vegetation also are usually included. Measurements of habitat are typically made over a wider geographic scale than are measurements of species distribution.

**Habitat quality index** is the qualitative description (level 1) of instream habitat and riparian conditions surrounding the reach sampled. Scores range from 0 to 100 percent with higher scores indicative of desirable habitat conditions for aquatic life. Index only applicable to wadable streams.

**Hardness** of water is a physical-chemical characteristic that commonly is recognized by the increased quantity of soap required to produce lather. It is computed as the sum of equivalents of polyvalent cations (primarily calcium and magnesium) and is expressed as the equivalent concentration of calcium carbonate ( $\text{CaCO}_3$ ).

**High tide** is the maximum height reached by each rising tide. The high-high and low-high tides are the higher and lower of the two high tides, respectively, of each tidal day. See NOAA web site:  
<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Hilsenhoff's Biotic Index (HBI)** is an indicator of organic pollution that uses tolerance values to weight taxa abundances; usually increases with pollution. It is calculated as follows:

$$IBI = \sum \frac{n(a)}{N}$$

where  $n$  is the number of individuals of each taxon,  $a$  is the tolerance value of each taxon, and  $N$  is the total number of organisms in the sample.

**Horizontal datum** (See "Datum")

**Hydrologic index stations** referred to in this report are continuous-record gaging stations that have been selected as representative of streamflow patterns for their respective regions. Station locations are shown on index maps.

**Hydrologic unit** is a geographic area representing part or all of a surface drainage basin or distinct hydrologic feature as defined by the former Office of Water Data Coordination and delineated on the State Hydrologic Unit Maps by the USGS. Each hydrologic unit is identified by an 8-digit number.

**Inch (IN., in.)**, as used in this report, refers to the depth to which the drainage area would be covered with water if all of the runoff for a given time period were uniformly distributed on it. (See also "Annual runoff")

**Instantaneous discharge** is the discharge at a particular instant of time. (See also "Discharge")

**Island**, as used in this report, is a mid-channel bar that has permanent woody vegetation, is flooded once a year on average, and remains stable except during large flood events.

**Laboratory reporting level (LRL)** is generally equal to twice the yearly determined long-term method detection level (LT-MDL). The LRL controls false negative error. The probability of falsely reporting a nondetection for a sample that contained an analyte at a concentration equal to or greater than the LRL is predicted to be less than or equal to 1 percent. The value of the LRL will be reported with a "less than" (<) remark code for samples in which the analyte was not detected. The National Water Quality Laboratory (NWQL) collects quality-control data from selected analytical methods on a continuing basis to determine LT-MDLs and to establish LRLs. These values are reevaluated annually on the basis of the most current quality-control data and, therefore, may change. [Note: In several previous NWQL documents (NWQL Technical Memorandum 98.07, 1998), the LRL was called the nondetection value or NDV—a term that is no longer used.]

**Land-surface datum (lsd)** is a datum plane that is approximately at land surface at each ground-water observation well.

**Latent heat flux** (often used interchangeably with latent heat-flux density) is the amount of heat energy that converts water from liquid to vapor (evaporation) or from vapor to liquid (condensation) across a specified cross-sectional area per unit time. Usually expressed in watts per square meter.

**Light-attenuation coefficient**, also known as the extinction coefficient, is a measure of water clarity. Light is attenuated according to the Lambert-Beer equation:

$$I = I_0 e^{-\lambda L}$$

where  $I_0$  is the source light intensity,  $I$  is the light intensity at length  $L$  (in meters) from the source,  $\lambda$  is the light-attenuation coefficient, and  $e$  is the base of the natural logarithm. The light-attenuation coefficient is defined as:

$$\lambda = -\frac{1}{L} \log_e -$$

**Lipid** is any one of a family of compounds that are insoluble in water and that make up one of the principal components of living cells. Lipids include fats, oils, waxes, and steroids. Many environmental contaminants such as organochlorine pesticides are lipophilic.

**Long-term method detection level (LT-MDL)** is a detection level derived by determining the standard deviation of a minimum of 24 method detection limit (MDL) spike sample measurements over an extended period of time. LT-MDL data are collected on a continuous basis to assess year-to-year variations in the LT-MDL. The LT-MDL controls false positive error. The chance of falsely reporting a concentration at or greater than the LT-MDL for a sample that did not contain the analyte is predicted to be less than or equal to 1 percent.

**Low tide** is the minimum height reached by each falling tide. The high-low and low-low tides are the higher and lower of the two low tides, respectively, of each tidal day.

See NOAA web site:

<http://www.co-ops.nos.noaa.gov/tideglos.html>

**Macrophytes** are the macroscopic plants in the aquatic environment. The most common macrophytes are the rooted vascular plants that usually are arranged in zones in aquatic ecosystems and restricted in the area by the extent of illumination through the water and sediment deposition along the shoreline.

**Mean concentration of suspended sediment** (Daily mean suspended-sediment concentration) is the time-weighted concentration of suspended sediment passing a stream cross section during a given time period. (See also "Daily mean suspended-sediment concentration" and "Suspended-sediment concentration")

**Mean discharge (MEAN)** is the arithmetic mean of individual daily mean discharges during a specific period. (See also "Discharge")

**Mean high or low tide** is the average of all high or low tides, respectively, over a specific period.

**Mean sea level** is a local tidal datum. It is the arithmetic mean of hourly heights observed over the National Tidal Datum Epoch. Shorter series are specified in the name; for example, monthly mean sea level and yearly mean sea level. In order that they may be recovered when needed, such datums are referenced to fixed points known as benchmarks. (See also "Datum")

**Measuring point (MP)** is an arbitrary permanent reference point from which the distance to water surface in a well is measured to obtain water level.

**Membrane filter** is a thin microporous material of specific pore size used to filter bacteria, algae, and other very small particles from water.

**Metamorphic stage** refers to the stage of development that an organism exhibits during its transformation from an immature form to an adult form. This developmental process exists for most insects, and the degree of difference from the immature stage to the adult form varies from relatively slight to pronounced, with many intermediates. Examples of metamorphic stages of insects are egg-larva-adult or egg-nymph-adult.

**Method detection limit (MDL)** is the minimum concentration of a substance that can be measured and reported with 99-percent confidence that the analyte concentration is greater than zero. It is determined from the analysis of a sample in a given matrix containing the analyte. At the MDL concentration, the risk of a false positive is predicted to be less than or equal to 1 percent.

**Methylene blue active substances (MBAS)** are apparent detergents. The determination depends on the formation of a blue color when methylene blue dye reacts with synthetic anionic detergent compounds.

**Micrograms per gram (UG/G,  $\mu\text{g/g}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the element per unit mass (gram) of material analyzed.

**Micrograms per kilogram (UG/KG,  $\mu\text{g/kg}$ )** is a unit expressing the concentration of a chemical constituent as the mass (micrograms) of the constituent per unit mass (kilogram) of the material analyzed. One microgram per kilogram is equivalent to 1 part per billion.

**Micrograms per liter (UG/L,  $\mu\text{g/L}$ )** is a unit expressing the concentration of chemical constituents in water as mass (micrograms) of con-

stituent per unit volume (liter) of water. One thousand micrograms per liter is equivalent to 1 milligram per liter. One microgram per liter is equivalent to 1 part per billion.

**Microsiemens per centimeter** (US/CM,  $\mu\text{S}/\text{cm}$ ) is a unit expressing the amount of electrical conductivity of a solution as measured between opposite faces of a centimeter cube of solution at a specified temperature. Siemens is the International System of Units nomenclature. It is synonymous with mhos and is the reciprocal of resistance in ohms.

**Milligrams per liter** (MG/L, mg/L) is a unit for expressing the concentration of chemical constituents in water as the mass (milligrams) of constituent per unit volume (liter) of water. Concentration of suspended sediment also is expressed in milligrams per liter and is based on the mass of dry sediment per liter of water-sediment mixture.

**Minimum reporting level** (MRL) is the smallest measured concentration of a constituent that may be reliably reported by using a given analytical method.

**Miscellaneous site**, miscellaneous station, or miscellaneous sampling site is a site where streamflow, sediment, and/or water-quality data or water-quality or sediment samples are collected once, or more often on a random or discontinuous basis to provide better areal coverage for defining hydrologic and water-quality conditions over a broad area in a river basin.

**Most probable number** (MPN) is an index of the number of coliform bacteria that, more probably than any other number, would give the results shown by the laboratory examination; it is not an actual enumeration. MPN is determined from the distribution of gas-positive cultures among multiple inoculated tubes.

**Multiple-plate samplers** are artificial substrates of known surface area used for obtaining benthic invertebrate samples. They consist of a series of spaced, hardboard plates on an eyebolt.

**Nanograms per liter** (NG/L, ng/L) is a unit expressing the concentration of chemical constituents in solution as mass (nanograms) of solute per unit volume (liter) of water. One million nanograms per liter is equivalent to 1 milligram per liter.

**National Geodetic Vertical Datum of 1929** (NGVD of 1929) is a fixed reference adopted as a standard geodetic datum for elevations determined by leveling. It was formerly called "Sea Level Datum of 1929" or "mean sea level". Although the datum was derived from the mean sea level at 26 tide stations, it does not

necessarily represent local mean sea level at any particular place. See NOAA web site: <http://www.ngs.noaa.gov/faq.shtml#WhatVD29VD88> (See "North American Vertical Datum of 1988")

**Natural substrate** refers to any naturally occurring immersed or submersed solid surface, such as a rock or tree, upon which an organism lives. (See also "Substrate")

**Nekton** are the consumers in the aquatic environment and consist of large free-swimming organisms that are capable of sustained, directed mobility.

**Nephelometric turbidity unit** (NTU) is the measurement for reporting turbidity that is based on use of a standard suspension of formazin. Turbidity measured in NTU uses nephelometric methods that depend on passing specific light of a specific wavelength through the sample.

**North American Vertical Datum of 1988** (NAVD 1988) is a fixed reference adopted as the official civilian vertical datum for elevations determined by Federal surveying and mapping activities in the United States. This datum was established in 1991 by minimum-constraint adjustment of the Canadian, Mexican, and United States first-order terrestrial leveling networks.

**Open or screened interval** is the length of unscreened opening or of well screen through which water enters a well, in feet below land surface.

**Organic carbon** (OC) is a measure of organic matter present in aqueous solution, suspension, or bottom sediment. May be reported as dissolved organic carbon (DOC), particulate organic carbon (POC), or total organic carbon (TOC).

**Organic mass or volatile mass** of a living substance is the difference between the dry mass and ash mass and represents the actual mass of the living matter. Organic mass is expressed in the same units as for ash mass and dry mass. (See also "Ash mass", "Biomass", and "Dry mass")

**Organism count/area** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per area habitat, usually square meter ( $\text{m}^2$ ), acre, or hectare. Periphyton, benthic organisms, and macrophytes are expressed in these terms.

**Organism count/volume** refers to the number of organisms collected and enumerated in a sample and adjusted to the number per sample volume, usually milliliter (mL) or liter (L). Numbers of planktonic organisms can be expressed in these terms.



**Organochlorine compounds** are any chemicals that contain carbon and chlorine. Organochlorine compounds that are important in investigations of water, sediment, and biological quality include certain pesticides and industrial compounds.

**Parameter code** is a 5-digit number used in the USGS computerized data system, National Water Information System (NWIS), to uniquely identify a specific constituent or property.

**Partial-record station** is a site where discrete measurements of one or more hydrologic parameters are obtained over a period of time without continuous data being recorded or computed. A common example is a crest-stage gage partial-record station at which only peak stages and flows are recorded.

**Particle size** is the diameter, in millimeters (mm), of a particle determined by sieve or sedimentation methods. The sedimentation method utilizes the principle of Stokes law to calculate sediment particle sizes. Sedimentation methods (pipet, bottom-withdrawal tube, visual-accumulation tube, sedigraph) determine fall diameter of particles in either distilled water (chemically dispersed) or in native water (the river water at the time and point of sampling).

**Particle-size classification**, as used in this report, agrees with the recommendation made by the American Geophysical Union Subcommittee on Sediment Terminology. The classification is as follows:

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Classification Size (mm) Method of analysis

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Clay	>0.00024 - 0.004	Sedimentation
Silt	>0.004 - 0.062	Sedimentation
Sand	>0.062 - 2.0	Sedimentation/sieve
Gravel	>2.0 - 64.0	Sieve
Cobble	>64 - 256	Manual measurement
Boulder	>256	Manual measurement

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The particle-size distributions given in this report are not necessarily representative of all particles in transport in the stream. For the sedimentation method, most of the organic matter is removed, and the sample is subjected to mechanical and chemical dispersion before analysis in distilled water. Chemical dispersion is not used for native water analysis.

**Peak flow (peak stage)** is an instantaneous local maximum value in the continuous time series of streamflows or stages, preceded by a period of increasing values and followed by a period of decreasing values. Several peak values ordinarily occur in a year. The maximum peak value in a year is called the annual peak; peaks lower than the annual peak are called secondary peaks. Occasionally, the annual peak may not be the maximum value for

the year; in such cases, the maximum value occurs at midnight at the beginning or end of the year, on the recession from or rise toward a higher peak in the adjoining year. If values are recorded at a discrete series of times, the peak recorded value may be taken as an approximation of the true peak, which may occur between the recording instants. If the values are recorded with finite precision, a sequence of equal recorded values may occur at the peak; in this case, the first value is taken as the peak.

**Percent composition** or **percent of total** is a unit for expressing the ratio of a particular part of a sample or population to the total sample or population, in terms of types, numbers, weight, mass, or volume.

**Percent shading** is a measure of the amount of sunlight potentially reaching the stream. A clinometer is used to measure left and right bank canopy angles. These values are added together, divided by 180, and multiplied by 100 to compute percentage of shade.

**Periodic-record station** is a site where stage, discharge, sediment, chemical, physical, or other hydrologic measurements are made one or more times during a year but at a frequency insufficient to develop a daily record.

**Periphyton** is the assemblage of microorganisms attached to and living upon submerged solid surfaces. Although primarily consisting of algae, they also include bacteria, fungi, protozoa, rotifers, and other small organisms. Periphyton are useful indicators of water quality.

**Pesticides** are chemical compounds used to control undesirable organisms. Major categories of pesticides include insecticides, miticides, fungicides, herbicides, and rodenticides.

**pH** of water is the negative logarithm of the hydrogen-ion activity. Solutions with pH less than 7.0 standard units are termed "acidic," and solutions with a pH greater than 7.0 are termed "basic." Solutions with a pH of 7.0 are neutral. The presence and concentration of many dissolved chemical constituents found in water are affected, in part, by the hydrogen-ion activity of water. Biological processes including growth, distribution of organisms, and toxicity of the water to organisms also are affected, in part, by the hydrogen-ion activity of water.

**Phytoplankton** is the plant part of the plankton. They are usually microscopic, and their movement is subject to the water currents. Phytoplankton growth is dependent upon solar radiation and nutrient substances. Because they are able to incorporate as well as

release materials to the surrounding water, the phytoplankton have a profound effect upon the quality of the water. They are the primary food producers in the aquatic environment and commonly are known as algae. (See also "Plankton")

**Picocurie** (PC, pCi) is one trillionth ( $1 \times 10^{-12}$ ) of the amount of radioactive nuclide represented by a curie (Ci). A curie is the quantity of radioactive nuclide that yields  $3.7 \times 10^{10}$  radioactive disintegrations per second (dps). A picocurie yields 0.037 dps, or 2.22 dpm (disintegrations per minute).

**Plankton** is the community of suspended, floating, or weakly swimming organisms that live in the open water of lakes and rivers. Concentrations are expressed as a number of cells per milliliter (cells/mL) of sample.

**Polychlorinated biphenyls** (PCBs) are industrial chemicals that are mixtures of chlorinated biphenyl compounds having various percentages of chlorine. They are similar in structure to organochlorine insecticides.

**Polychlorinated naphthalenes** (PCNs) are industrial chemicals that are mixtures of chlorinated naphthalene compounds. They have properties and applications similar to polychlorinated biphenyls (PCBs) and have been identified in commercial PCB preparations.

**Pool**, as used in this report, is a small part of a stream reach with little velocity, commonly with water deeper than surrounding areas.

**Primary productivity** is a measure of the rate at which new organic matter is formed and accumulated through photo-synthetic and chemosynthetic activity of producer organisms (chiefly, green plants). The rate of primary production is estimated by measuring the amount of oxygen released (oxygen method) or the amount of carbon assimilated (carbon method) by the plants.

**Primary productivity (carbon method)** is expressed as milligrams of carbon per area per unit time [ $\text{mg C}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg C}/(\text{m}^3/\text{time})$ ] for phytoplankton. The carbon method defines the amount of carbon dioxide consumed as measured by radioactive carbon (carbon-14). The carbon-14 method is of greater sensitivity than the oxygen light and dark bottle method and is preferred for use with unenriched water samples. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Primary productivity (oxygen method)** is expressed as milligrams of oxygen per area per

unit time [ $\text{mg O}/(\text{m}^2/\text{time})$ ] for periphyton and macrophytes or per volume [ $\text{mg O}/(\text{m}^3/\text{time})$ ] for phytoplankton. The oxygen method defines production and respiration rates as estimated from changes in the measured dissolved-oxygen concentration. The oxygen light and dark bottle method is preferred if the rate of primary production is sufficient for accurate measurements to be made within 24 hours. Unit time may be either the hour or day, depending on the incubation period. (See also "Primary productivity")

**Radioisotopes** are isotopic forms of elements that exhibit radioactivity. Isotopes are varieties of a chemical element that differ in atomic weight but are very nearly alike in chemical properties. The difference arises because the atoms of the isotopic forms of an element differ in the number of neutrons in the nucleus; for example, ordinary chlorine is a mixture of isotopes having atomic weights of 35 and 37, and the natural mixture has an atomic weight of about 35.453. Many of the elements similarly exist as mixtures of isotopes, and a great many new isotopes have been produced in the operation of nuclear devices such as the cyclotron. There are 275 isotopes of the 81 stable elements, in addition to more than 800 radioactive isotopes.

**Reach**, as used in this report, is a length of stream that is chosen to represent a uniform set of physical, chemical, and biological conditions within a segment. It is the principal sampling unit for collecting physical, chemical, and biological data.

**Recoverable from bed (bottom) material** is the amount of a given constituent that is in solution after a representative sample of bottom material has been digested by a method (usually using an acid or mixture of acids) that results in dissolution of readily soluble substances. Complete dissolution of all bottom material is not achieved by the digestion treatment and thus the determination represents less than the total amount (that is, less than 95 percent) of the constituent in the sample. To achieve comparability of analytical data, equivalent digestion procedures would be required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. (See also "Bed material")

**Recurrence interval**, also referred to as return period, is the average time, usually expressed in years, between occurrences of hydrologic events of a specified type (such as exceedances of a specified high flow or nonexceedance of a specified low flow). The terms

"return period" and "recurrence interval" do not imply regular cyclic occurrence. The actual times between occurrences vary randomly, with most of the times being less than the average and a few being substantially greater than the average. For example, the 100-year flood is the flow rate that is exceeded by the annual maximum peak flow at intervals whose average length is 100 years (that is, once in 100 years, on average); almost two-thirds of all exceedances of the 100-year flood occur less than 100 years after the previous exceedance, half occur less than 70 years after the previous exceedance, and about one-eighth occur more than 200 years after the previous exceedance. Similarly, the 7-day, 10-year low flow ( $7Q_{10}$ ) is the flow rate below which the annual minimum 7-day-mean flow dips at intervals whose average length is 10 years (that is, once in 10 years, on average); almost two-thirds of the nonexceedances of the  $7Q_{10}$  occur less than 10 years after the previous nonexceedance, half occur less than 7 years after, and about one-eighth occur more than 20 years after the previous nonexceedance. The recurrence interval for annual events is the reciprocal of the annual probability of occurrence. Thus, the 100-year flood has a 1-percent chance of being exceeded by the maximum peak flow in any year, and there is a 10-percent chance in any year that the annual minimum 7-day-mean flow will be less than the  $7Q_{10}$ .

**Replicate samples** are a group of samples collected in a manner such that the samples are thought to be essentially identical in composition.

**Return period** (See "Recurrence interval")

**Riffle**, as used in this report, is a shallow part of the stream where water flows swiftly over completely or partially submerged obstructions to produce surface agitation.

**River mileage** is the curvilinear distance, in miles, measured upstream from the mouth along the meandering path of a stream channel in accordance with Bulletin No. 14 (October 1968) of the Water Resources Council and typically is used to denote location along a river.

**Run**, as used in this report, is a relatively shallow part of a stream with moderate velocity and little or no surface turbulence.

**Runoff** is the quantity of water that is discharged ("runs off") from a drainage basin during a given time period. Runoff data may be presented as volumes in acre-feet, as mean discharges per unit of drainage area in cubic feet per second per square mile, or as depths of water on the drainage basin in inches. (See also "Annual runoff")

**Sea level**, as used in this report, refers to one of the two commonly used national vertical datums (NGVD 1929 or NAVD 1988). See separate entries for definitions of these datums.

**Sediment** is solid material that originates mostly from disintegrated rocks; when transported by, suspended in, or deposited from water, it is referred to as "fluvial sediment." Sediment includes chemical and biochemical precipitates and decomposed organic material, such as humus. The quantity, characteristics, and cause of the occurrence of sediment in streams are affected by environmental and land-use factors. Some major factors are topography, soil characteristics, land cover, and depth and intensity of precipitation.

**Sensible heat flux** (often used interchangeably with latent sensible heat-flux density) is the amount of heat energy that moves by turbulent transport through the air across a specified cross-sectional area per unit time and goes to heating (cooling) the air. Usually expressed in watts per square meter.

**Seven-day, 10-year low flow** ( $7Q_{10}$ ) is the discharge below which the annual 7-day minimum flow falls in 1 year out of 10 on the long-term average. The recurrence interval of the  $7Q_{10}$  is 10 years; the chance that the annual 7-day minimum flow will be less than the  $7Q_{10}$  is 10 percent in any given year. (See also "Annual 7-day minimum" and "Recurrence interval")

**Shelves**, as used in this report, are streambank features extending nearly horizontally from the flood plain to the lower limit of persistent woody vegetation.

**Sodium adsorption ratio** (SAR) is the expression of relative activity of sodium ions in exchange reactions within soil and is an index of sodium or alkali hazard to the soil. Sodium hazard in water is an index that can be used to evaluate the suitability of water for irrigating crops.

**Soil heat flux** (often used interchangeably with soil heat-flux density) is the amount of heat energy that moves by conduction across a specified cross-sectional area of soil per unit time and goes to heating (or cooling) the soil. Usually expressed in watts per square meter.

**Soil-water content** is the water lost from the soil upon drying to constant mass at 105 °C; expressed either as mass of water per unit mass of dry soil or as the volume of water per unit bulk volume of soil.

**Specific electrical conductance (conductivity)** is a measure of the capacity of water (or

other media) to conduct an electrical current. It is expressed in microsiemens per centimeter at 25 °C. Specific electrical conductance is a function of the types and quantity of dissolved substances in water and can be used for approximating the dissolved-solids content of the water. Commonly, the concentration of dissolved solids (in milligrams per liter) is from 55 to 75 percent of the specific conductance (in microsiemens). This relation is not constant from stream to stream, and it may vary in the same source with changes in the composition of the water.

**Stable isotope ratio** (per MIL) is a unit expressing the ratio of the abundance of two radioactive isotopes. Isotope ratios are used in hydrologic studies to determine the age or source of specific water, to evaluate mixing of different water, as an aid in determining reaction rates, and other chemical or hydrologic processes.

**Stage** (See "Gage height")

**Stage-discharge relation** is the relation between the water-surface elevation, termed stage (gage height), and the volume of water flowing in a channel per unit time.

**Streamflow** is the discharge that occurs in a natural channel. Although the term "discharge" can be applied to the flow of a canal, the word "streamflow" uniquely describes the discharge in a surface stream course. The term "streamflow" is more general than "runoff" as streamflow may be applied to discharge whether or not it is affected by diversion or regulation.

**Substrate** is the physical surface upon which an organism lives.

**Substrate embeddedness class** is a visual estimate of riffle streambed substrate larger than gravel that is surrounded or covered by fine sediment (<2mm, sand or finer). Below are the class categories expressed as the percentage covered by fine sediment:

0	no gravel or larger substrate		
1	> 75 percent	4	5-25 percent
2	51-75 percent	5	< 5 percent
3	26-50 percent		

**Surface area of a lake** is that area (acres) encompassed by the boundary of the lake as shown on USGS topographic maps, or other available maps or photographs. Because surface area changes with lake stage, surface areas listed in this report represent those determined for the stage at the time the maps or photographs were obtained.

**Surficial bed material** is the upper surface (0.1 to 0.2 foot) of the bed material that is sampled using U.S. Series Bed-Material Samplers.

**Suspended** (as used in tables of chemical analyses) refers to the amount (concentration) of undissolved material in a water-sediment mixture. It is defined operationally as the material retained on a 0.45-micrometer filter.

**Suspended, recoverable** is the amount of a given constituent that is in solution after the part of a representative suspended water-sediment sample that is retained on a 0.45-micrometer membrane filter has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all the particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the sample. To achieve comparability of analytical data, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures are likely to produce different analytical results. Determinations of "suspended, recoverable" constituents are made either by directly analyzing the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total recoverable concentrations of the constituent. (See also "Suspended")

**Suspended sediment** is the sediment maintained in suspension by the upward components of turbulent currents or that exists in suspension as a colloid. (See also "Sediment")

**Suspended-sediment concentration** is the velocity-weighted concentration of suspended sediment in the sampled zone (from the water surface to a point approximately 0.3 foot above the bed) expressed as milligrams of dry sediment per liter of water-sediment mixture (mg/L). The analytical technique uses the mass of all of the sediment and the net weight of the water-sediment mixture in a sample to compute the suspended-sediment concentration. (See also "Sediment" and "Suspended sediment")

**Suspended-sediment discharge** (tons/d) is the rate of sediment transport, as measured by dry mass or volume, that passes a cross section in a given time. It is calculated in units of tons per day as follows: concentration (mg/L) x discharge (ft<sup>3</sup>/s) x 0.0027. (See also "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Suspended-sediment load** is a general term that refers to a given characteristic of the material in suspension that passes a point during a specified period of time. The term needs to be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It is not synonymous with either suspended-sediment discharge or concentration. (See also "Sediment")

**Suspended, total** is the total amount of a given constituent in the part of a water-sediment sample that is retained on a 0.45-micrometer membrane filter. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. Knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to determine when the results should be reported as "suspended, total." Determinations of "suspended, total" constituents are made either by directly analyzing portions of the suspended material collected on the filter or, more commonly, by difference, on the basis of determinations of (1) dissolved and (2) total concentrations of the constituent. (See also "Suspended")

**Suspended solids, total residue at 105 °C concentration** is the concentration of inorganic and organic material retained on a filter, expressed as milligrams of dry material per liter of water (mg/L). An aliquot of the sample is used for this analysis.

**Synoptic studies** are short-term investigations of specific water-quality conditions during selected seasonal or hydrologic periods to provide improved spatial resolution for critical water-quality conditions. For the period and conditions sampled, they assess the spatial distribution of selected water-quality conditions in relation to causative factors, such as land use and contaminant sources.

**Taxa (Species) richness** is the number of species (taxa) present in a defined area or sampling unit.

**Taxonomy** is the division of biology concerned with the classification and naming of organisms. The classification of organisms is based upon a hierarchical scheme beginning with Kingdom and ending with Species at the base. The higher the classification level, the fewer features the organisms have in common. For example, the taxonomy of a particular mayfly, *Hexagenia limbata*, is the following:

Kingdom:	Animal
Phylum:	Arthropoda
Class:	Insecta
Order:	Ephemeroptera
Family:	Ephemeridae
Genus:	<i>Hexagenia</i>

Species: *Hexagenia limbata*

**Thalweg** is the line formed by connecting points of minimum streambed elevation (deepest part of the channel).

**Thermograph** is an instrument that continuously records variations of temperature on a chart. The more general term "temperature recorder" is used in the table descriptions and refers to any instrument that records temperature whether on a chart, a tape, or any other medium.

**Time-weighted average** is computed by multiplying the number of days in the sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the total number of days. A time-weighted average represents the composition of water resulting from the mixing of flow proportionally to the duration of the concentration.

**Tons per acre-foot** (T/acre-ft) is the dry mass (tons) of a constituent per unit volume (acre-foot) of water. It is computed by multiplying the concentration of the constituent, in milligrams per liter, by 0.00136.

**Tons per day** (T/DAY, tons/d) is a common chemical or sediment discharge unit. It is the quantity of a substance in solution, in suspension, or as bedload that passes a stream section during a 24-hour period. It is equivalent to 2,000 pounds per day, or 0.9072 metric tons per day.

**Total** is the amount of a given constituent in a representative whole-water (unfiltered) sample, regardless of the constituent's physical or chemical form. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent present in both the dissolved and suspended phases of the sample. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total." (Note that the word "total" does double duty here, indicating both that the sample consists of a water-suspended sediment mixture and that the analytical method determined at least 95 percent of the constituent in the sample.)

**Total coliform bacteria** are a particular group of bacteria that are used as indicators of possible sewage pollution. This group includes coliforms that inhabit the intestine of warmblooded animals and those that inhabit soils. They are characterized as aerobic or facultative anaerobic, gram-negative, non-spore-forming, rod-shaped bacteria that ferment lactose with gas formation within 48 hours at 35 °C. In the laboratory, these bac-

teria are defined as all the organisms that produce colonies with a golden-green metallic sheen within 24 hours when incubated at 35 °C plus or minus 1.0 °C on m-Endo medium (nutrient medium for bacterial growth). Their concentrations are expressed as number of colonies per 100 milliliters of sample. (See also "Bacteria")

**Total discharge** is the quantity of a given constituent, measured as dry mass or volume, that passes a stream cross section per unit of time. When referring to constituents other than water, this term needs to be qualified, such as "total sediment discharge," "total chloride discharge," and so on.

**Total in bottom material** is the amount of a given constituent in a representative sample of bottom material. This term is used only when the analytical procedure assures measurement of at least 95 percent of the constituent determined. A knowledge of the expected form of the constituent in the sample, as well as the analytical methodology used, is required to judge when the results should be reported as "total in bottom material."

**Total length** (fish) is the straight-line distance from the anterior point of a fish specimen's snout, with the mouth closed, to the posterior end of the caudal (tail) fin, with the lobes of the caudal fin squeezed together.

**Total load** refers to all of a constituent in transport. When referring to sediment, it includes suspended load plus bed load.

**Total organism count** is the number of organisms collected and enumerated in any particular sample. (See also "Organism count/volume")

**Total recoverable** is the amount of a given constituent in a whole-water sample after a sample has been digested by a method (usually using a dilute acid solution) that results in dissolution of only readily soluble substances. Complete dissolution of all particulate matter is not achieved by the digestion treatment, and thus the determination represents something less than the "total" amount (that is, less than 95 percent) of the constituent present in the dissolved and suspended phases of the sample. To achieve comparability of analytical data for whole-water samples, equivalent digestion procedures are required of all laboratories performing such analyses because different digestion procedures may produce different analytical results.

**Total sediment discharge** is the mass of suspended-sediment plus bed-load transport, measured as dry weight, that passes a cross

section in a given time. It is a rate and is reported as tons per day. (See also "Bedload," "Bedload discharge," "Sediment," "Suspended sediment," and "Suspended-sediment concentration")

**Total sediment load** or **total load** is the sediment in transport as bedload and suspended-sediment load. The term may be qualified, such as "annual suspended-sediment load" or "sand-size suspended-sediment load," and so on. It differs from total sediment discharge in that load refers to the material, whereas discharge refers to the quantity of material, expressed in units of mass per unit time. (See also "Sediment," "Suspended-sediment load," and "Total load")

**Transect**, as used in this report, is a line across a stream perpendicular to the flow and along which measurements are taken, so that morphological and flow characteristics along the line are described from bank to bank. Unlike a cross section, no attempt is made to determine known elevation points along the line.

**Turbidity** is the reduction in the transparency of a solution due to the presence of suspended and some dissolved substances. The measurement technique records the collective optical properties of the solution that cause light to be scattered and attenuated rather than transmitted in straight lines; the higher the intensity of scattered or attenuated light, the higher the value of the turbidity. Turbidity is expressed in nephelometric turbidity units (NTU). Depending on the method used, the turbidity units as NTU can be defined as the intensity of light of a specified wavelength scattered or attenuated by suspended particles or absorbed at a method specified angle, usually 90 degrees, from the path of the incident light. Currently approved methods for the measurement of turbidity in the USGS include those that conform to U.S. EPA Method 180.1, ASTM D1889-00, and ISO 7027. Measurements of turbidity by these different methods and different instruments are unlikely to yield equivalent values.

**Ultraviolet (UV) absorbance (absorption)** at 254 or 280 nanometers is a measure of the aggregate concentration of the mixture of UV absorbing organic materials dissolved in the analyzed water, such as lignin, tannin, humic substances, and various aromatic compounds. UV absorbance (absorption) at 254 or 280 nanometers is measured in UV absorption units per centimeter of pathlength of UV light through a sample.

**Unconfined aquifer** is an aquifer whose upper surface is a water table free to fluctuate

under atmospheric pressure. (See "Water-table aquifer")

**Vertical datum** (See "Datum")

**Volatile organic compounds** (VOCs) are organic compounds that can be isolated from the water phase of a sample by purging the water sample with inert gas, such as helium, and subsequently analyzed by gas chromatography. Many VOCs are human-made chemicals that are used and produced in the manufacture of paints, adhesives, petroleum products, pharmaceuticals, and refrigerants. They are often components of fuels, solvents, hydraulic fluids, paint thinners, and dry cleaning agents commonly used in urban settings. VOC contamination of drinking-water supplies is a human health concern because many are toxic and are known or suspected human carcinogens.

**Water table** is that surface in a ground-water body at which the water pressure is equal to the atmospheric pressure.

**Water-table aquifer** is an unconfined aquifer within which the water table is found.

**Water year** in USGS reports dealing with surface-water supply is the 12-month period October 1 through September 30. The water year is designated by the calendar year in which it ends and which includes 9 of the 12 months. Thus, the year ending September 30, 2002, is called the "2002 water year."

**WDR** is used as an abbreviation for "Water-Data Report" in the REVISED RECORDS paragraph to refer to State annual hydrologic-data reports. (WRD was used as an abbreviation for "Water-Resources Data" in reports published prior to 1976.)

**Weighted average** is used in this report to indicate discharge-weighted average. It is computed by multiplying the discharge for a sampling period by the concentrations of individual constituents for the corresponding period and dividing the sum of the products by the sum of the discharges. A discharge-weighted average approximates the composition of water that would be found in a reservoir containing all the water passing a given location during the water year after thorough mixing in the reservoir.

**Wet mass** is the mass of living matter plus contained water. (See also "Biomass" and "Dry mass")

**Wet weight** refers to the weight of animal tissue or other substance including its contained water. (See also "Dry weight")

**WSP** is used as an acronym for "Water-Supply Paper" in reference to previously published reports.

**Zooplankton** is the animal part of the plankton. Zooplankton are capable of extensive movements within the water column and often are large enough to be seen with the unaided eye. Zooplankton are secondary consumers feeding upon bacteria, phytoplankton, and detritus. Because they are the grazers in the aquatic environment, the zooplankton are a vital part of the aquatic food web. The zooplankton community is dominated by small crustaceans and rotifers. (See also "Plankton")

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##### **Section B. Surface Water**

- 4-B1. *Low-flow investigations*, by H.C. Riggs: USGS-TWRI book 4, chap. B1. 1972. 18 p.

- 4-B2. *Storage analyses for water supply*, by H.C. Riggs and C.H. Hardison: USGS-TWRI book 4, chap. B2. 1973. 20 p.
- 4-B3. *Regional analyses of streamflow characteristics*, by H.C. Riggs: USGS-TWRI book 4, chap. B3. 1973. 15 p.

#### **Section D. Interrelated Phases of the Hydrologic Cycle**

- 4-D1. *Computation of rate and volume of stream depletion by wells*, by C.T. Jenkins: USGS-TWRI book 4, chap. D1. 1970. 17 p.

#### **Book 5. Laboratory Analysis**

##### **Section A. Water Analysis**

- 5-A1. *Methods for determination of inorganic substances in water and fluvial sediments*, by M.J. Fishman and L.C. Friedman, editors: USGS-TWRI book 5, chap. A1. 1989. 545 p.
- 5-A2. *Determination of minor elements in water by emission spectroscopy*, by P.R. Barnett and E.C. Mallory, Jr.: USGS-TWRI book 5, chap. A2. 1971. 31 p.
- 5-A3. *Methods for the determination of organic substances in water and fluvial sediments*, edited by R.L. Wershaw, M.J. Fishman, R.R. Grabbe, and L.E. Lowe: USGS-TWRI book 5, chap. A3. 1987. 80 p.
- 5-A4. *Methods for collection and analysis of aquatic biological and microbiological samples*, by L.J. Britton and P.E. Greenson, editors: USGS-TWRI book 5, chap. A4. 1989. 363 p.
- 5-A5. *Methods for determination of radioactive substances in water and fluvial sediments*, by L.L. Thatcher, V.J. Janzer, and K.W. Edwards: USGS-TWRI book 5, chap. A5. 1977. 95 p.
- 5-A6. *Quality assurance practices for the chemical and biological analyses of water and fluvial sediments*, by L.C. Friedman and D.E. Erdmann: USGS-TWRI book 5, chap. A6. 1982. 181 p.

##### **Section C. Sediment Analysis**

- 5-C1. *Laboratory theory and methods for sediment analysis*, by H.P. Guy: USGS-TWRI book 5, chap. C1. 1969. 58 p.

#### **Book 6. Modeling Techniques**

##### **Section A. Ground Water**

- 6-A1. *A modular three-dimensional finite-difference ground-water flow model*, by M.G. McDonald and A.W. Harbaugh: USGS-TWRI book 6, chap. A1. 1988. 586 p.
- 6-A2. *Documentation of a computer program to simulate aquifer-system compaction using the modular finite-difference ground-water flow model*, by S.A. Leake and D.E. Prudic: USGS-TWRI book 6, chap. A2. 1991. 68 p.

- 6-A3. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 1: Model Description and User's Manual*, by L.J. Torak: USGS-TWRI book 6, chap. A3. 1993. 136 p.
- 6-A4. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 2: Derivation of finite-element equations and comparisons with analytical solutions*, by R.L. Cooley: USGS-TWRI book 6, chap. A4. 1992. 108 p.
- 6-A5. *A modular finite-element model (MODFE) for areal and axisymmetric ground-water-flow problems, Part 3: Design philosophy and programming details*, by L.J. Torak: USGS-TWRI book 6, chap. A5, 1993. 243 p.
- 6-A6. *A coupled surface-water and ground-water flow model (MODBRANCH) for simulation of stream-aquifer interaction*, by Eric D. Swain and Eliezer J. Wexler: USGS-TWRI book 6, chap. A5, 1996. 125 p.

#### **Book 7. Automated Data Processing and Computations**

##### **Section C. Computer Programs**

- 7-C1. *Finite difference model for aquifer simulation in two dimensions with results of numerical experiments*, by P.C. Trescott, G.F. Pinder, and S.P. Larson: USGS-TWRI book 7, chap. C1. 1976. 116 p.
- 7-C2. *Computer model of two-dimensional solute transport and dispersion in ground water*, by L.F. Konikow and J.D. Bredehoeft: USGS-TWRI book 7, chap. C2. 1978. 90 p.
- 7-C3. *A model for simulation of flow in singular and interconnected channels*, by R.W. Schaffranek, R.A. Baltzer, and D.E. Goldberg: USGS-TWRI book 7, chap. C3. 1981. 110 p.

#### **Book 8. Instrumentation**

##### **Section A. Instruments for Measurement of Water Level**

- 8-A1. *Methods of measuring water levels in deep wells*, by M.S. Garber and F.C. Koopman: USGS-TWRI book 8, chap. A1. 1968. 23 p.
- 8-A2. *Installation and service manual for U.S. Geological Survey manometers*, by J.D. Craig: USGS-TWRI book 8, chap. A2. 1983. 57 p.

##### **Section B. Instruments for Measurement of Discharge**

- 8-B2. *Calibration and maintenance of vertical-axis type current meters*, by G.F. Smoot and C.E. Novak: USGS-TWRI book 8, chap. B2. 1968. 15 p.

#### **Book 9. Handbooks for Water-Resources Investigations**

##### **Section A. National Field Manual for the Collection of Water-Quality Data**

- 9-A1. *National Field Manual for the Collection of Water-Quality Data: Preparations for Water Sampling*, by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A1. 1998. 47 p.
- 9-A2. *National Field Manual for the Collection of Water-Quality Data: Selection of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A2. 1998. 94 p.
- 9-A3. *National Field Manual for the Collection of Water-Quality Data: Cleaning of Equipment for Water Sampling*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A3. 1998. 75 p.
- 9-A4. *National Field Manual for the Collection of Water-Quality Data: Collection of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A4. 1999. 156 p.
- 9-A5. *National Field Manual for the Collection of Water-Quality Data: Processing of Water Samples*, edited by F.D. Wilde, D.B. Radtke, Jacob Gibs, and R.T. Iwatsubo: USGS-TWRI book 9, chap. A5. 1999, 149 p.
- 9-A6. *National Field Manual for the Collection of Water-Quality Data: Field Measurements*, edited by F.D. Wilde and D.B. Radtke: USGS-TWRI book 9, chap. A6. 1998. Variously paginated.
- 9-A7. *National Field Manual for the Collection of Water-Quality Data: Biological Indicators*, edited by D.N. Myers and F.D. Wilde: USGS-TWRI book 9, chap. A7. 1997 and 1999. Variously paginated.
- 9-A8. *National Field Manual for the Collection of Water-Quality Data: Bottom-material samples*, by D.B. Radtke: USGS-TWRI book 9, chap. A8. 1998. 48 p.
- 9-A9. *National Field Manual for the Collection of Water-Quality Data: Safety in Field Activities*, by S.L. Lane and R.G. Fay: USGS-TWRI book 9, chap. A9. 1998. 60 p.



Figure 5. Location of surface-water stations.



Figure 6. Location of water-quality stations.



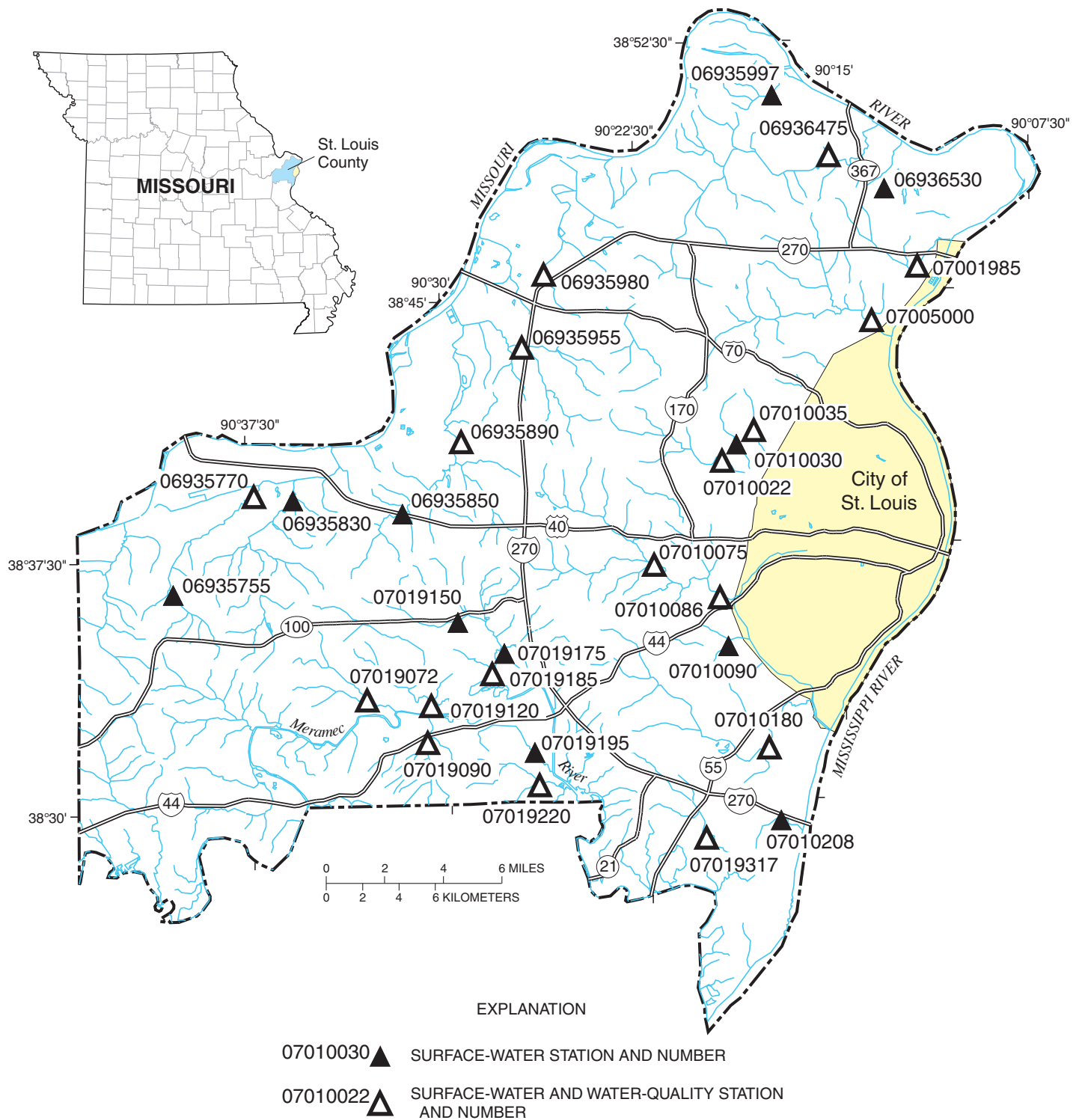


Figure 7. Location of Metropolitan St. Louis Sewer District stations.

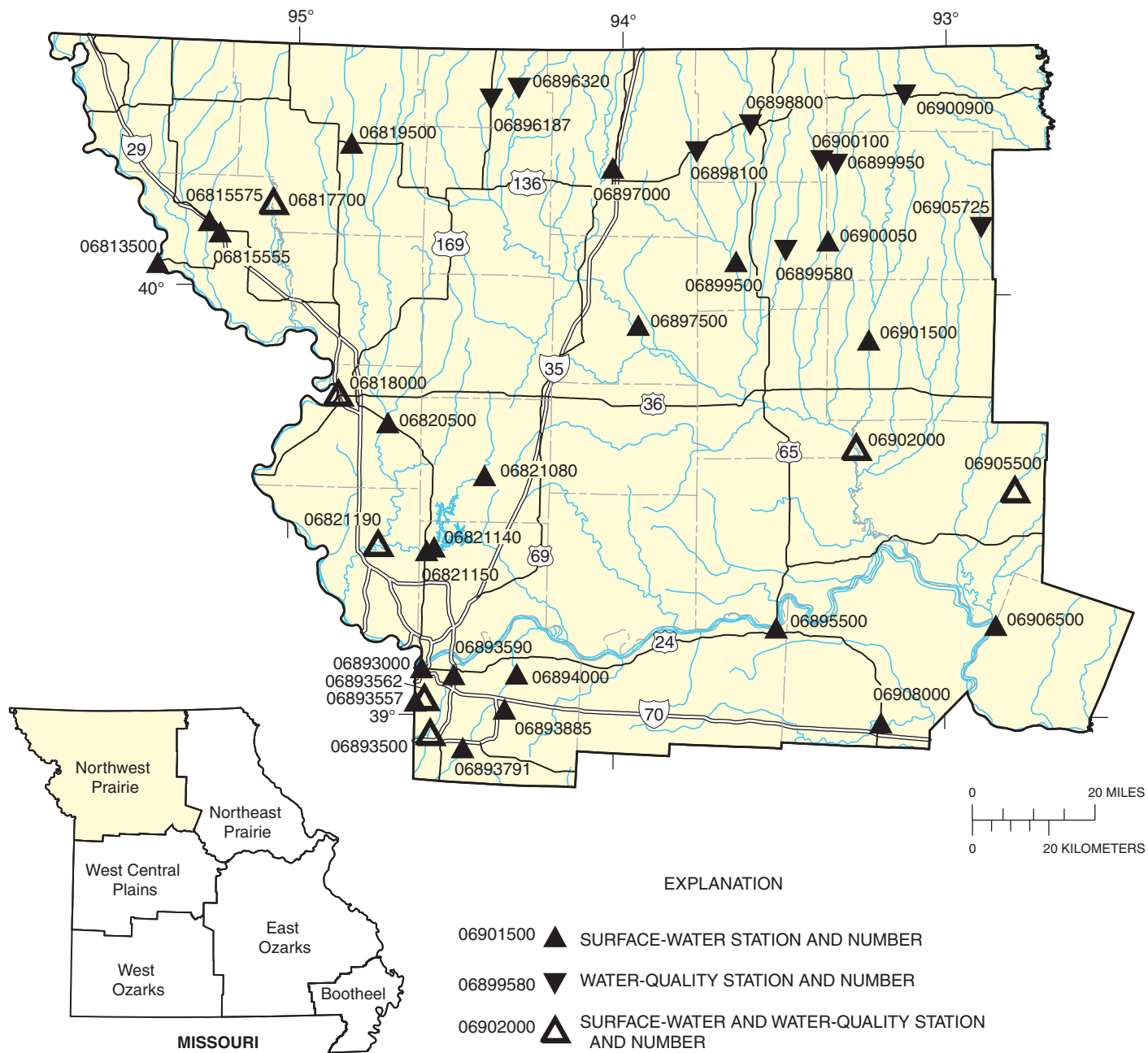


Figure 8. Location of stations in the Northwest Prairie.

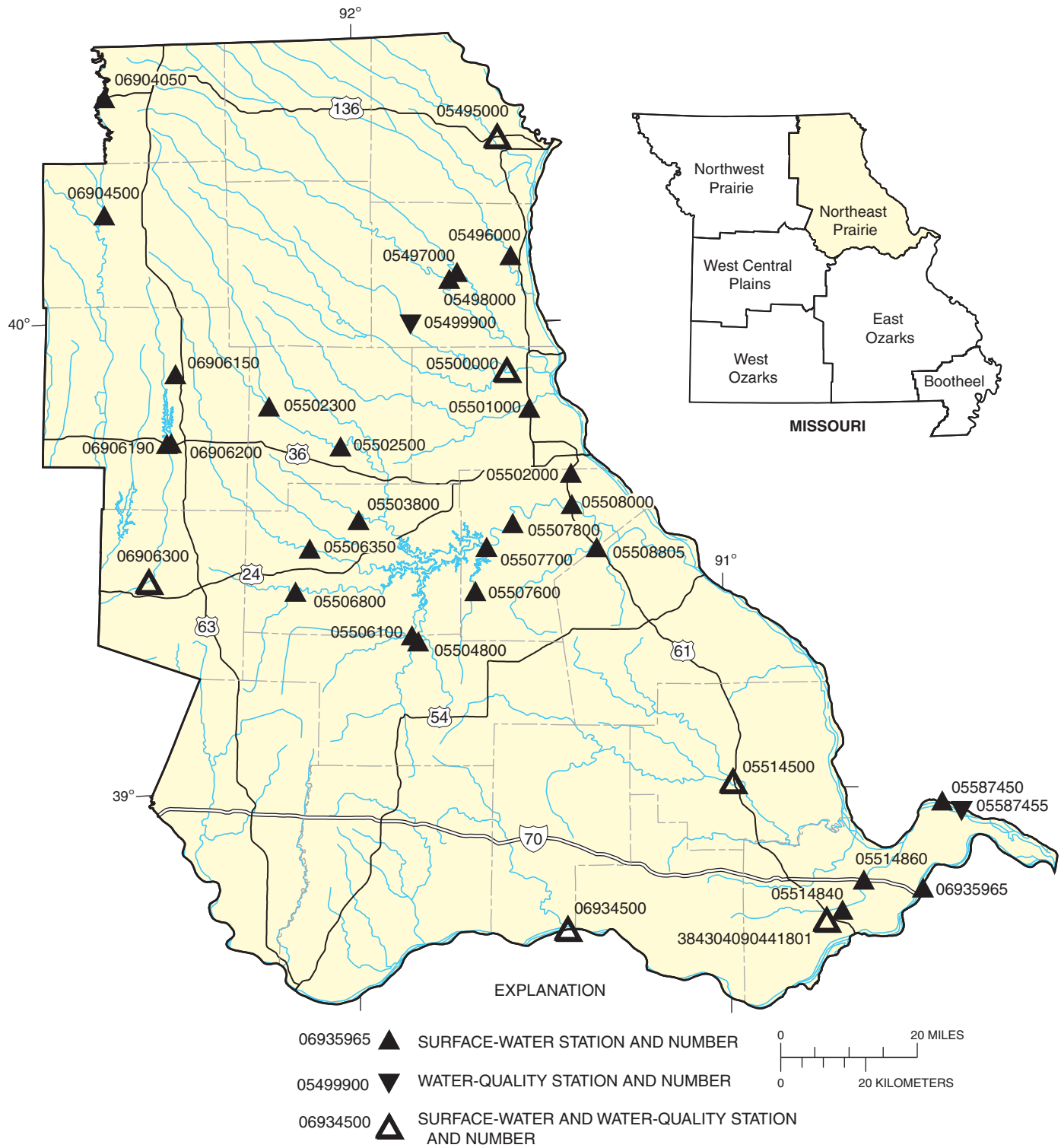


Figure 9. Location of stations in the Northeast Prairie.



## EXPLANATION

- 06921760 ▲ SURFACE-WATER STATION AND NUMBER  
 06921582 ▼ WATER-QUALITY STATION AND NUMBER  
 06918070 ▲△ SURFACE-WATER AND WATER-QUALITY STATION AND NUMBER

Figure 10. Location of stations in the West Central Plains.



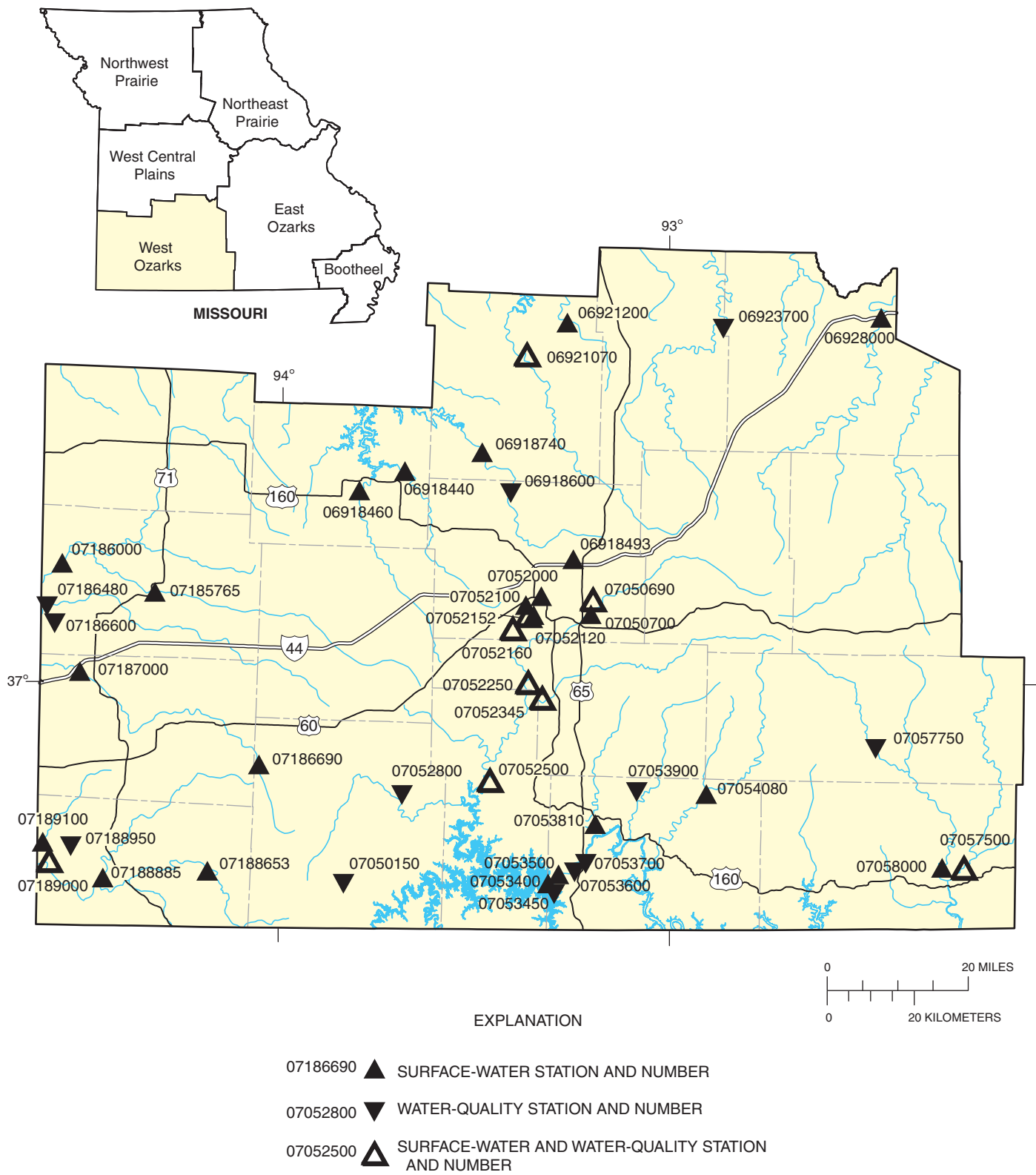
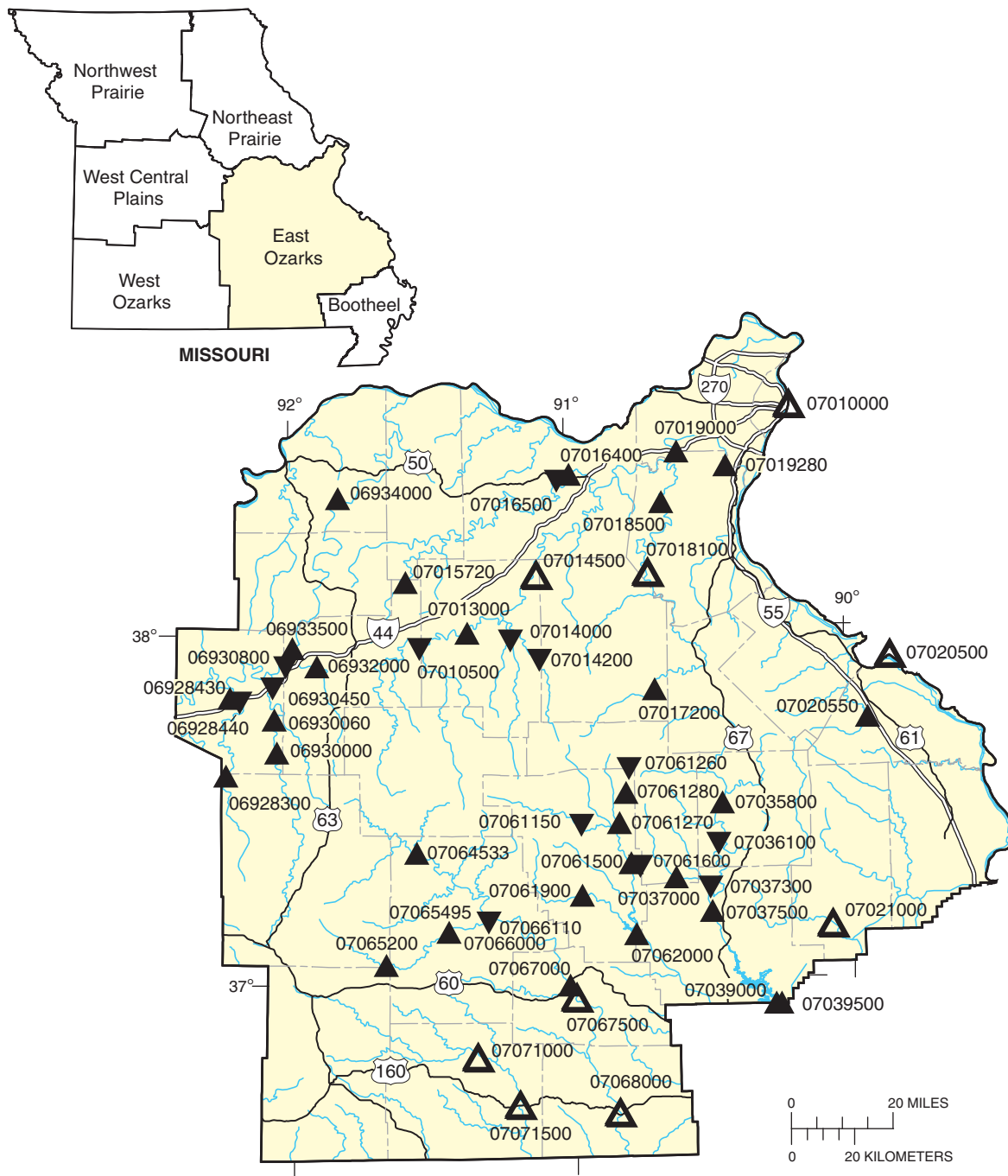


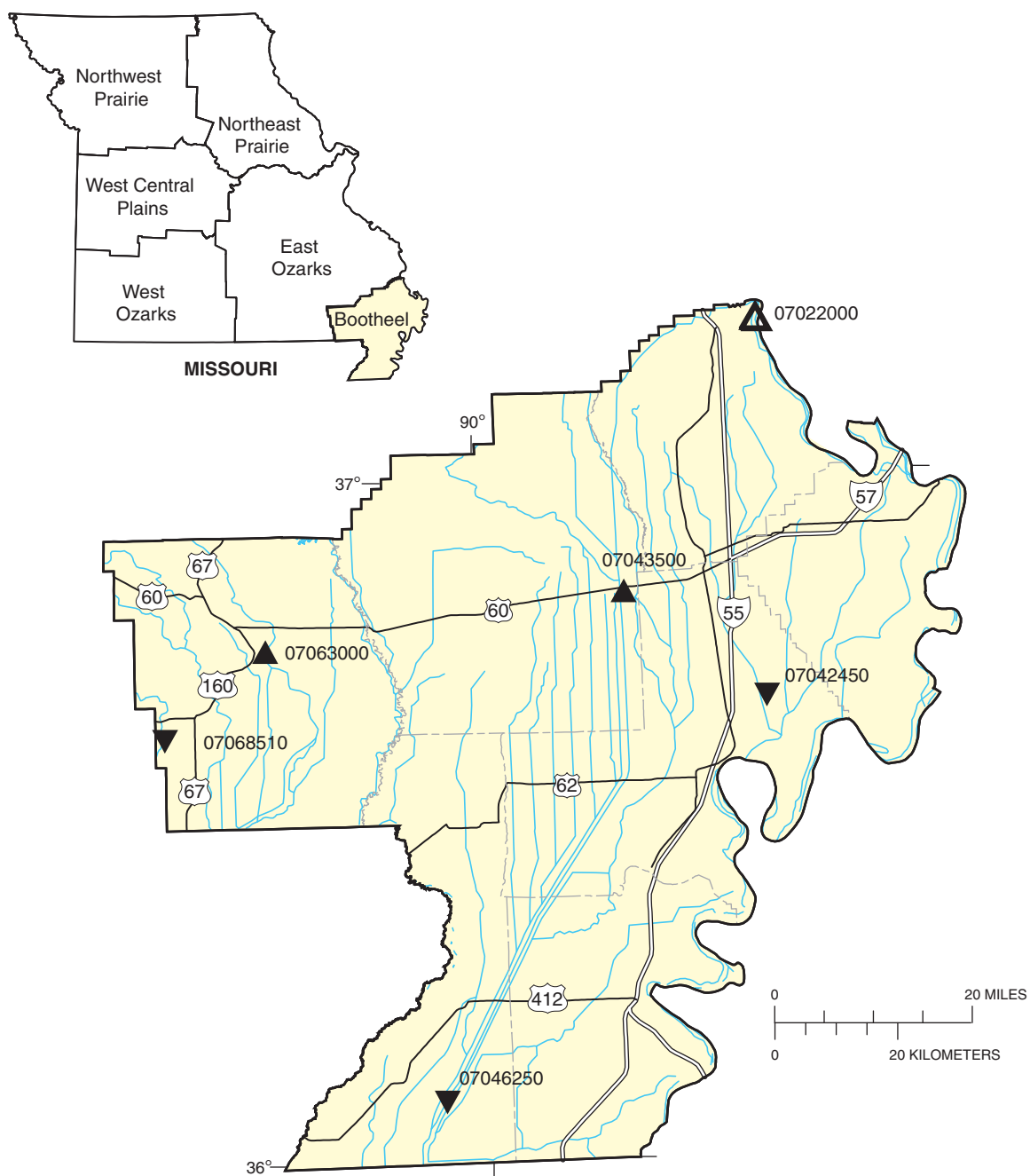
Figure 11. Location of stations in the West Ozarks.



## EXPLANATION

- 07065200 ▲ SURFACE-WATER STATION AND NUMBER
- 07066110 ▼ WATER-QUALITY STATION AND NUMBER
- 07067500 ▲△ SURFACE-WATER AND WATER-QUALITY STATION AND NUMBER

Figure 12. Location of stations in the East Ozarks.



## EXPLANATION

- 07043500 ▲ SURFACE-WATER STATION AND NUMBER
- 07046250 ▼ WATER-QUALITY STATION AND NUMBER
- 07020500 ▲△ SURFACE-WATER AND WATER-QUALITY STATION AND NUMBER

Figure 13. Location of stations in the Bootheel.

## FOX RIVER BASIN

05495000 FOX RIVER AT WAYLAND, MO

LOCATION.--Lat 40°23'33", long 91°35'50", in NW 1/4 sec.31, T.65 N., R.6 W., Clark County, Hydrologic Unit 07110001, on left bank 30 ft downstream from bridge on U.S. Highway 136, 0.8 mi west of Wayland, 5.0 mi downstream from Brush Creek, and at mile 15.2.

DRAINAGE AREA.--400 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1922 to current year.

REVISED RECORDS.--WSP 785: 1934. Revised daily mean discharges for the period Aug. 9, 1977, to Sept. 30, 1977, and the annual maximum peak for the 1977 water year published in WDR-MO-79-1: 1977.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 501.52 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1929, nonrecording gage at bridge 2.8 mi upstream at different datum; Oct. 1, 1929, to June 11, 1936, nonrecording gage at bridge 90 ft upstream; June 1936 to August 1988 at site 300 ft upstream, at present datum.

REMARKS.--Water-discharge records poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	24	44	25	e23	e180	e45	128	327	162	33	21	6.8
2	21	42	23	e20	e150	e45	91	240	e116	30	14	6.7
3	19	41	23	e19	e120	e50	75	188	92	29	11	5.8
4	19	38	23	e18	e80	e50	63	150	72	26	11	5.1
5	34	35	25	e17	e60	e48	52	124	86	25	10	4.8
6	34	30	24	e20	e50	57	50	156	63	24	19	4.4
7	32	29	23	e17	e45	119	55	230	51	23	20	4.1
8	32	27	23	e17	e45	154	501	207	44	22	12	3.6
9	26	28	21	e17	e67	e800	1250	825	39	93	11	3.2
10	24	25	20	e18	e264	e700	1210	817	35	57	8.7	3.1
11	32	24	20	e19	e314	e380	437	3170	1140	564	7.8	2.8
12	26	23	20	e18	e324	e224	248	9530	2990	627	7.4	2.4
13	28	23	25	e26	e282	e158	305	9270	3220	224	6.7	2.3
14	53	23	59	e23	e209	125	329	2380	2230	120	6.6	2.1
15	38	23	77	23	e170	102	195	881	1460	74	6.6	2.0
16	94	23	49	e22	e137	82	149	572	622	52	17	1.7
17	42	23	41	e29	e104	68	127	449	384	39	38	1.6
18	32	23	35	e33	e89	66	112	374	260	33	18	1.9
19	29	25	34	e35	84	62	96	301	215	29	127	2.4
20	27	26	32	e33	222	60	84	249	150	24	47	3.5
21	58	24	28	e30	501	58	213	207	116	25	30	5.7
22	2240	22	e46	e28	292	50	432	177	92	23	22	5.2
23	1380	21	e139	e30	156	45	218	169	79	19	177	4.0
24	1070	26	e96	e29	112	45	244	1160	66	17	71	3.6
25	448	33	e68	e27	88	51	320	2320	58	16	26	4.9
26	204	31	e53	e26	69	52	256	1740	51	14	18	5.8
27	124	29	e44	e24	e55	58	765	749	47	13	13	4.6
28	78	26	e39	e25	e50	61	3250	470	41	12	12	4.3
29	58	24	e34	e25	---	66	1410	297	36	16	10	3.4
30	49	25	e29	e45	---	76	532	464	34	20	11	3.1
31	46	---	e25	e200	---	159	---	254	---	41	8.4	---
MEAN	207	27.9	39.4	30.2	154	133	440	1240	468	76.3	26.4	3.83
MAX	2240	44	139	200	501	800	3250	9530	3220	627	177	6.8
MIN	19	21	20	17	45	45	50	124	34	12	6.6	1.6
IN.	0.60	0.08	0.11	0.09	0.40	0.38	1.23	3.58	1.31	0.22	0.08	0.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	MEAN	164	172	136	163	336	438	468	395	397	242	115	171
MAX	1313	1375	1330	1133	1433	2264	2750	2795	2223	3387	1509	1999	
(WY)	1987	1929	1983	1969	1982	1979	1973	1996	1947	1993	1970	1970	
MIN	0.00	0.01	0.02	0.19	0.42	8.56	2.35	1.39	0.06	0.21	0.02	0.17	
(WY)	1957	1957	1957	1957	1957	1956	1956	1956	1956	1936	1936	1937	

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1922 - 2002

ANNUAL MEAN	464	238	266
HIGHEST ANNUAL MEAN			927
LOWEST ANNUAL MEAN			17.6
HIGHEST DAILY MEAN	6990	Mar 16	19900
LOWEST DAILY MEAN	7.3	Jan 5	0.00
ANNUAL SEVEN-DAY MINIMUM	7.5	Jan 1	0.00
MAXIMUM PEAK FLOW	---		10900
MAXIMUM PEAK STAGE	---		18.35
INSTANTANEOUS LOW FLOW	---		1.2
ANNUAL RUNOFF (INCHES)	15.74		8.08
10 PERCENT EXCEEDS	1290		448
50 PERCENT EXCEEDS	69		42
90 PERCENT EXCEEDS	19		8.6

e Estimated

05495000 FOX RIVER AT WAYLAND, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1967 to September 1972, November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, (per- cent satur- ation) (00301)	OXYGEN, (mg/L) (00300)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)	
NOV 13...	1325	ENVIRONMENTAL	23	12.7	118	8.2	537	10.9	260	75.1	16.4	4.63	
JAN 14...	1400	ENVIRONMENTAL	e23	15.4	110	7.7	378	.4	--	--	--	--	
MAR 11...	1415	ENVIRONMENTAL	374	12.4	97	7.8	327	4.2	--	--	--	--	
MAR 11...	1416	REPLICATE	--	--	--	--	--	--	--	--	--	--	
MAY 14...	0920	ENVIRONMENTAL	2020	7.5	73	7.6	230	14.0	99	29.3	6.21	2.20	
JUL 09...	0910	ENVIRONMENTAL	120	5.7	76	8.0	538	29.4	--	--	--	--	
SEP 03...	1520	ENVIRONMENTAL	5.5	8.3	112	8.2	407	29.8	--	--	--	--	
DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, PENDEED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AM- MONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
NOV 13...	15.6	194	194	237	0	14.0	.2	72.9	<10	342	<.04	.47	<.05
JAN 14...	--	223	225	274	0	--	--	--	<10	--	<.04	.34	.20
MAR 11...	--	79	77	93	0	--	--	--	788	--	.12	3.0	2.33
MAR 11...	--	--	--	--	--	--	--	--	896	--	.16	3.1	2.60
MAY 14...	7.39	72	72	88	0	5.21	.2	22.6	810	185	<.04	2.2	2.29
JUL 09...	--	192	193	235	0	--	--	--	84	--	<.04	.74	<.05
SEP 03...	--	189	188	229	0	--	--	--	20	--	<.04	.54	<.05
DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
NOV 13...	<.008	<.06	<.02	E.05	25	46	K17	15	45	.8	E.02	<.1	<6
JAN 14...	E.004	<.06	<.02	<.06	58	K21	39	--	--	--	--	--	--
MAR 11...	.163	.09	.03	.90	1360	K1400	K4440	--	--	--	--	--	--
MAR 11...	.143	.10	.03	.91	--	--	--	--	--	--	--	--	--
MAY 14...	.061	.12	.05	.86	3200	5800	6800	558	8880	1.1	E.03	.3	E4
JUL 09...	<.008	E.03	.02	.09	K520	K865	K765	--	--	--	--	--	--
SEP 03...	<.008	<.06	E.01	.07	21	66	200	--	--	--	--	--	--

## FOX RIVER BASIN

05495000 FOX RIVER AT WAYLAND, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 13...	87	E.04	<1	256	<.01	.4	--	5
JAN 14...	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--
MAY 14...	520	1.23	18	33.4	.06	.5	--	57
JUL 09...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

05496000 WYACONDA RIVER ABOVE CANTON, MO

LOCATION.--Lat 40°08'32", long 91°33'55", in SW ¼ SW ¼ NE ¼ sec.28, T.62 N., R.6 W., Lewis County, Hydrologic Unit 07110001, on left bank on downstream side of bridge on State Highway 16, 1.9 mi upstream from Sugar Creek, 2.5 mi west of Canton, and at mile 16.7.

DRAINAGE AREA.--393 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1932 to September 1972, October 1979 to current year.

REVISED RECORDS.--WDR MO-92-1: (M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 517.41 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 1939, nonrecording gage 500 ft downstream at datum 2.00 ft lower; Sept. 25, 1975, to Sept. 17, 1979, nonrecording gage at present site and at datum 2.00 ft lower.

REMARKS.--Records fair except for estimated daily discharges and those below 50 ft<sup>3</sup>/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	25	47	21	17	108	52	109	444	137	25	27	7.4
2	23	42	20	16	102	51	93	337	109	23	18	6.2
3	21	37	20	16	76	50	80	258	75	22	14	6.4
4	21	33	20	16	60	50	68	190	82	21	13	5.4
5	40	31	20	16	56	51	61	143	82	20	12	3.8
6	38	29	20	17	49	60	55	1490	56	19	11	4.1
7	37	28	20	17	40	179	55	1720	34	18	8.7	4.1
8	37	28	20	17	37	190	336	514	36	18	8.5	3.8
9	36	26	19	17	124	856	1570	1340	33	45	8.1	2.9
10	34	25	18	18	438	1530	1100	1590	31	49	7.2	3.9
11	30	24	18	19	498	527	443	3130	216	527	6.8	3.4
12	36	22	19	20	397	299	256	8720	2570	582	7.2	3.2
13	31	22	23	22	312	215	196	12400	3090	210	8.1	2.7
14	87	22	32	23	256	169	191	9950	3680	86	7.0	2.5
15	79	22	78	24	188	124	143	3740	1770	52	6.0	3.0
16	603	22	49	22	156	108	122	1200	545	38	6.3	2.7
17	169	22	40	19	113	100	118	738	220	31	14	2.8
18	76	21	34	17	81	84	103	568	163	29	13	3.3
19	53	21	33	18	68	79	110	436	106	28	49	3.3
20	47	21	31	17	193	75	149	341	63	23	195	6.7
21	38	20	28	16	613	70	915	269	61	20	42	7.5
22	1430	20	30	18	326	68	1260	215	53	18	35	8.4
23	1810	21	33	21	170	67	432	185	45	18	174	5.1
24	1600	23	29	22	102	66	341	818	38	16	174	4.1
25	603	25	25	21	88	65	842	1940	36	19	47	3.1
26	336	30	25	22	62	67	428	2680	40	17	26	2.7
27	172	30	25	24	54	70	998	879	41	16	19	2.4
28	108	28	21	23	53	78	4020	602	31	14	15	2.7
29	77	24	20	23	---	105	2730	370	27	16	12	3.0
30	70	22	19	31	---	108	870	560	26	17	10	2.8
31	62	---	18	164	---	146	---	241	---	42	9.0	---
MEAN	252	26.3	26.7	24.3	172	186	606	1871	450	67.1	32.4	4.11
MAX	1810	47	78	164	613	1530	4020	12400	3680	582	195	8.4
MIN	21	20	18	16	37	50	55	143	26	14	6.0	2.4
IN.	0.74	0.07	0.08	0.07	0.46	0.55	1.72	5.49	1.28	0.20	0.09	0.01

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	139	164	151	161	362	410	438	471	376	281	128	156
MAX	1677	1463	1399	946	1529	1346	1809	3196	2594	2792	2242	2510
(WY)	1987	1986	1983	1946	2001	1985	1983	1996	1947	1993	1970	1986
MIN	0.00	0.00	0.47	0.10	2.05	7.53	3.38	1.69	0.66	0.02	0.00	0.02
(WY)	1954	1954	1954	1954	1989	1957	1956	1934	1956	1934	1934	1953

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL MEAN	468	312	269
HIGHEST ANNUAL MEAN			861
LOWEST ANNUAL MEAN			14.2
HIGHEST DAILY MEAN	7390	May 16	16500
LOWEST DAILY MEAN	3.1 Jan 1-3,5-8	Sep 27	0.00
ANNUAL SEVEN-DAY MINIMUM	3.1 Jan 1	Sep 12	0.00
MAXIMUM PEAK FLOW	---	12900 May 13	17700 Jun 30 1933
MAXIMUM PEAK STAGE	---	27.51 May 13	31.33 Sep 22 1986
INSTANTANEOUS LOW FLOW	---	2.4 Sep 26,27	0.00
ANNUAL RUNOFF (INCHES)	16.17	10.76	9.30
10 PERCENT EXCEEDS	1170	602	560
50 PERCENT EXCEEDS	75	37	31
90 PERCENT EXCEEDS	15	8.1	2.2

## FABIUS RIVER BASIN

05497000 NORTH FABIUS RIVER AT MONTICELLO, MO

LOCATION.--Lat 40°06'30", long 91°42'51", in SW ¼ SE ¼ sec.6, T.61 N., R.7 W., Lewis County, Hydrologic Unit 07110002, on right bank upstream from bridge on State Highway 16, 1.0 mi south of Monticello, and 19.0 mi upstream from Middle Fabius River.

DRAINAGE AREA.--452 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1922 to current year. Monthly discharge only for some periods, published in WSP 1308.

REVISED RECORDS.--WSP 925: 1937-39(M). WSP 1308: 1922(M), 1924-26(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 540.73 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 22, 1930, nonrecording gage at site 400 ft downstream at datum 0.03 ft lower; Nov. 22, 1930, to Nov. 28, 1967, nonrecording gage at present site and datum.

REMARKS.--Records fair except for Oct. 1 to April 15, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	64	25	17	183	e40	151	440	248	37	24	11
2	36	64	25	17	e120	39	113	344	196	34	18	11
3	27	56	23	17	e100	51	98	257	169	33	17	10
4	28	50	23	17	e80	61	84	199	157	31	16	9.2
5	56	45	23	18	e65	54	70	156	139	29	15	8.8
6	67	42	22	19	e60	53	62	1300	114	30	15	8.5
7	49	40	22	19	58	93	55	1830	100	71	14	8.4
8	32	39	20	19	67	85	217	615	91	32	13	8.1
9	23	35	19	19	183	910	914	1740	84	77	13	7.9
10	22	34	18	18	417	1420	1210	2020	79	69	12	7.3
11	22	32	18	16	443	451	444	4010	106	629	12	7.0
12	24	32	19	18	287	269	261	12100	726	302	11	6.6
13	38	30	25	21	218	199	267	15600	2160	144	11	6.6
14	100	30	45	24	143	162	266	6050	2860	94	12	6.8
15	127	30	63	27	94	137	184	1920	662	67	13	7.1
16	609	29	44	28	82	108	151	1210	305	54	14	7.1
17	182	27	36	24	64	84	126	879	193	45	15	7.2
18	86	28	30	23	50	70	105	690	141	43	14	7.4
19	56	29	29	24	47	68	435	549	112	43	54	7.9
20	47	27	25	24	157	72	185	431	93	39	84	13
21	40	27	21	23	475	90	1180	365	80	32	46	12
22	1030	25	22	23	266	72	1160	321	71	27	42	11
23	1540	24	23	22	130	67	420	289	64	25	48	11
24	1360	31	24	20	89	66	522	771	58	26	51	11
25	477	e40	22	18	68	66	918	2290	71	23	33	9.3
26	258	e36	22	19	52	70	698	2000	67	23	22	8.1
27	152	32	21	20	e45	79	1120	849	51	21	18	7.2
28	110	28	20	28	e40	85	5110	622	46	19	16	6.6
29	90	27	19	20	---	96	1930	980	43	24	15	6.4
30	77	27	18	28	---	98	706	777	40	30	13	6.3
31	69	---	18	65	---	227	---	362	---	32	12	---
MEAN	222	35.3	25.3	22.4	146	176	639	1999	311	70.5	23.0	8.53
MAX	1540	64	63	65	475	1420	5110	15600	2860	629	84	13
MIN	22	24	18	16	40	39	55	156	40	19	11	6.3
IN.	0.57	0.09	0.06	0.06	0.34	0.45	1.58	5.10	0.77	0.18	0.06	0.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

MEAN	183	193	169	193	359	456	527	474	422	295	129	179
MAX	1496	1347	1521	1679	1346	2336	3171	2941	3148	3320	2149	1966
(WY)	1987	1929	1983	1974	1937	1979	1973	1996	1947	1993	1970	1970
MIN	0.01	1.06	0.73	0.14	2.43	7.91	7.15	1.71	0.07	0.00	0.00	0.51
(WY)	1957	1957	1957	1940	1989	1956	1956	1934	1934	1934	1934	1953

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1922 - 2002

ANNUAL MEAN	461	308	298
HIGHEST ANNUAL MEAN			923
LOWEST ANNUAL MEAN			18.0
HIGHEST DAILY MEAN	9970	May 15	17900
LOWEST DAILY MEAN	5.4	Jan 7,9	0.00
ANNUAL SEVEN-DAY MINIMUM	5.6	Jan 1	0.00
MAXIMUM PEAK FLOW	---		20700
MAXIMUM PEAK STAGE	---		33.03
INSTANTANEOUS LOW FLOW	---		0.00
ANNUAL RUNOFF (INCHES)	13.85	9.26	8.96
10 PERCENT EXCEEDS	948	673	574
50 PERCENT EXCEEDS	86	46	46
90 PERCENT EXCEEDS	19	13	4.2

e Estimated



05498000 MIDDLE FABIUS RIVER NEAR MONTICELLO, MO

LOCATION.--Lat 40°05'37", long 91°44'08", in SE ¼ sec.12, T.61 N., R.8 W., Lewis County, Hydrologic Unit 07110002, on left bank on downstream end of bridge pier on State Highway 16, 2.5 mi southwest of Monticello, 8.0 mi downstream from Radish Branch, and 17 mi upstream from mouth.

DRAINAGE AREA.--393 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1945 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 540.46 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 4, 1967, nonrecording gage at present site and datum.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 17, 1945, reached a stage of 23.3 ft, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	13	29	17	11	222	48	153	412	170	20	13	5.4
2	11	26	17	11	e85	e45	104	343	120	18	11	4.7
3	9.8	25	16	11	e60	e45	88	234	92	16	9.1	3.5
4	9.7	25	16	11	e101	e48	77	171	84	16	7.8	3.0
5	45	23	15	11	e65	50	64	131	68	15	7.1	2.5
6	32	21	15	12	e45	75	54	1280	59	17	6.4	2.3
7	26	19	15	11	e40	125	54	2650	51	28	5.8	2.4
8	22	18	15	11	e45	208	211	2120	46	312	5.5	2.3
9	16	16	14	12	109	536	690	1520	42	335	5.1	2.1
10	14	16	14	13	241	1510	850	1760	38	132	4.7	2.1
11	12	16	14	13	526	563	423	3560	68	307	4.7	2.0
12	13	16	15	14	450	286	234	9310	239	421	4.6	1.8
13	40	15	19	14	338	219	161	16500	1010	223	4.5	1.8
14	61	15	19	15	248	176	185	13600	2630	121	4.2	1.7
15	141	15	39	16	212	147	144	5630	730	72	4.0	1.7
16	461	15	57	16	186	122	109	822	270	46	4.1	1.7
17	203	15	41	15	161	101	86	485	168	33	4.0	1.8
18	91	15	32	15	128	85	69	423	124	28	4.3	1.9
19	50	16	29	16	108	78	195	329	100	26	8.6	1.8
20	33	15	26	14	203	78	246	239	82	19	18	3.9
21	25	15	24	15	639	70	1020	181	68	17	21	3.4
22	20	15	24	15	445	63	1710	146	58	18	20	4.6
23	394	16	23	16	240	56	677	125	50	14	51	3.7
24	915	20	19	16	168	52	931	337	43	12	23	3.2
25	365	21	18	15	132	53	1470	2300	47	11	34	2.7
26	177	20	18	16	102	56	567	2460	55	11	30	2.4
27	105	18	18	18	77	58	1300	881	33	11	16	2.0
28	68	19	17	17	63	67	4110	559	28	9.6	11	1.8
29	49	19	15	17	---	82	3210	379	25	13	8.8	1.8
30	38	18	13	29	---	98	708	574	22	12	7.1	1.7
31	32	---	13	195	---	166	---	292	---	12	6.0	---
MEAN	113	18.4	20.9	20.4	194	173	663	2250	221	75.7	11.8	2.59
MAX	915	29	57	195	639	1510	4110	16500	2630	421	51	5.4
MIN	9.7	15	13	11	40	45	54	125	22	9.6	4.0	1.7
IN.	0.33	0.05	0.06	0.06	0.51	0.51	1.88	6.60	0.63	0.22	0.03	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1946 - 2002, BY WATER YEAR (WY)

MEAN	160	174	157	201	338	451	502	496	316	301	114	150
MAX	1368	1481	1418	1179	1359	1521	2719	2776	2582	3038	1758	1815
(WY)	1987	1986	1983	1969	1969	1979	1973	1996	1947	1993	1970	1970
MIN	0.00	0.00	0.11	0.31	1.23	6.32	3.83	1.48	1.04	0.78	0.56	0.09
(WY)	1954	1954	1957	1957	1957	1957	1956	1989	1956	1988	1988	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1946 - 2002	
ANNUAL MEAN	375		316		279	
HIGHEST ANNUAL MEAN					837	
LOWEST ANNUAL MEAN					18.7	
HIGHEST DAILY MEAN	6950	May 15	16500	May 13	16500	May 13 2002
LOWEST DAILY MEAN	3.2	Jan 11	1.7	Sep 14-16,30	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	3.5	Jan 7	1.8	Sep 12	0.00	Several Years
MAXIMUM PEAK FLOW	---		17600	May 13	17700	Apr 23 1973
MAXIMUM PEAK STAGE	---		26.16	May 13	27.14	Apr 23 1973
INSTANTANEOUS LOW FLOW	---		1.2	Sep 19	0.00	Several Years
ANNUAL RUNOFF (INCHES)	12.94		10.90		9.66	
10 PERCENT EXCEEDS	757		530		581	
50 PERCENT EXCEEDS	47		32		39	
90 PERCENT EXCEEDS	9.8		4.7		2.8	

e Estimated

## FABIUS RIVER BASIN

05499900 TROUBLESOME CREEK NEAR EWING, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°59'52", long 91°50'37", in NE ¼ NE ¼ SE ¼ sec.13, T.60 N., R.9 W., Lewis County, Hydrologic Unit 07110003, located approximately 2.0 mi west of Ewing on U.S. Highway 156.

DRAINAGE AREA.--2.88 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
NOV 13...	1530	ENVIRONMENTAL	.96	3.9	35	7.1	321	9.5	130	38.7	9.19	8.29
JAN 14...	1550	ENVIRONMENTAL	e.10	10.2	74	6.9	233	1.1	--	--	--	--
MAR 11...	1725	ENVIRONMENTAL	1.0	12.1	97	7.4	290	4.8	--	--	--	--
MAY 14...	1350	ENVIRONMENTAL	1090	7.0	72	7.1	124	15.7	49	14.8	2.85	4.25
JUL 09...	1115	ENVIRONMENTAL	7.0	4.2	53	7.4	383	26.1	--	--	--	--
SEP 03...	1320	ENVIRONMENTAL	.12	4.9	59	7.2	1160	24.1	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 13...	11.3	118	120	146	0	16.3	.3	19.8	24	208	<.04	.94	<.05
JAN 14...	--	120	120	147	0	--	--	--	16	--	.07	.99	<.05
MAR 11...	--	69	69	84	0	--	--	--	52	--	.06	1.6	1.75
MAY 14...	3.65	41	39	48	0	5.46	.2	9.0	197	139	<.04	1.6	1.75
JUL 09...	--	145	144	176	0	--	--	--	45	--	<.04	.73	.08
SEP 03...	--	100	98	120	0	--	--	--	15	--	.06	1.8	45.4

DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 13...	<.008	.06	.03	.14	100	180	92	66	227	2.0	<.04	<.1	<6
JAN 14...	<.008	E.03	<.02	E.05	49	K4	33	--	--	--	--	--	--
MAR 11...	.030	.08	.05	.25	860	K1360	860	--	--	--	--	--	--
MAY 14...	.075	.22	.16	.42	K1300	2300	2300	729	3720	1.2	E.02	<.1	<6
JUL 09...	E.005	<.06	E.01	.07	750	K1380	1300	--	--	--	--	--	--
SEP 03...	.263	E.03	<.02	.06	100	104	288	--	--	--	--	--	--

05499900 TROUBLESOME CREEK NEAR EWING, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

Date	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 13...	571	.17	<1	318	E.01	E.2	--	10
JAN 14...	--	--	--	--	--	--	--	--
MAR 11...	--	--	--	--	--	--	--	--
MAY 14...	412	1.24	6	54.8	.02	E.3	--	17
JUL 09...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than value shown.

## FABIUS RIVER BASIN

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO

LOCATION.--Lat 39°53'49", long 91°34'49", in SW ¼ NW ¼ sec.21, T.59 N., R.6 W., Marion County, Hydrologic Unit 07110003, on right bank at downstream side of county highway bridge, 4.5 mi southwest of Taylor, 5.0 mi downstream from Grassy Creek, and 5.3 mi upstream from confluence with North Fabius River.

DRAINAGE AREA.--620 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1934 to current year. Prior to December 1934 monthly discharge only published in WSP 1308.

REVISED RECORDS.--WSP 825: 1936.

GAGE.--Water-stage recorder. Datum of gage is 482.91 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to May 14, 1936, nonrecording gage at bridge 4.0 mi downstream at datum 21.94 ft lower; May 14, 1936, to Dec. 2, 1940, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair except for the period Dec. 25 to Jan. 1, which is poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1928 reached a stage of 18.49 ft, from floodmarks, at present site and datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	23	15	e11	1210	67	56	849	332	23	8.6	9.0
2	8.6	20	14	10	578	70	55	702	236	21	7.7	7.4
3	6.5	17	14	10	340	64	51	527	186	20	7.2	6.4
4	6.2	15	14	11	262	56	47	347	151	20	7.7	5.8
5	21	15	14	12	172	59	45	262	127	18	8.8	5.1
6	110	14	14	12	188	70	44	2290	127	20	7.8	4.7
7	99	15	13	12	147	138	45	5430	96	233	7.5	4.3
8	49	14	12	12	98	174	136	4310	80	58	6.6	3.8
9	32	14	12	12	78	331	800	7080	70	31	5.7	3.2
10	35	12	12	12	76	620	722	4620	71	135	5.0	2.7
11	35	12	13	13	139	814	553	6720	138	80	4.5	2.0
12	34	12	14	13	398	414	348	9440	296	56	4.2	2.0
13	31	12	17	14	304	239	230	9800	1050	45	4.1	3.1
14	31	12	16	14	223	178	171	13900	1950	64	4.1	4.4
15	149	12	15	13	147	144	138	15400	1170	47	3.8	4.1
16	344	12	18	12	116	118	116	9080	466	38	4.1	3.6
17	450	12	18	11	104	99	101	2270	249	31	5.0	3.4
18	267	11	17	11	90	87	91	1270	165	40	4.7	3.2
19	144	11	16	11	84	79	88	1010	126	26	7.1	3.0
20	84	12	15	11	176	73	78	753	99	28	8.8	2.9
21	56	11	16	11	313	68	349	538	80	20	7.4	3.1
22	43	11	23	11	378	64	969	404	64	17	6.4	3.1
23	34	12	21	11	330	58	1030	309	54	17	39	2.5
24	28	24	19	11	207	55	1960	263	47	15	54	2.2
25	22	20	e18	12	143	54	4040	1290	40	12	67	2.2
26	18	18	e16	12	110	51	2460	3430	34	13	34	2.2
27	15	20	e15	11	87	49	2720	1930	32	12	21	2.5
28	16	18	e14	11	71	48	4990	1110	28	10	16	2.7
29	39	16	e13	11	---	49	4600	1360	26	11	12	3.2
30	32	17	e12	51	---	50	2630	1610	23	10	11	3.1
31	27	---	e11	1270	---	51	---	587	---	9.0	10	---
MEAN	73.5	14.8	15.2	53.5	235	145	989	3513	254	38.1	12.9	3.70
MAX	450	24	23	1270	1210	814	4990	15400	1950	233	67	9.0
MIN	6.2	11	11	10	71	48	44	262	23	9.0	3.8	2.0
IN.	0.14	0.03	0.03	0.10	0.39	0.27	1.78	6.53	0.46	0.07	0.02	0.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

	MEAN	261	290	250	298	537	700	774	786	500	379	167	191
MAX	2690	3103	2137	2000	2340	2659	3989	4078	3891	3647	2335	2841	
(WY)	1987	1986	1983	1965	1982	1973	1973	1995	1947	1993	1970	1970	
MIN	0.00	0.00	1.52	2.12	4.78	15.0	13.4	7.56	5.68	0.71	0.00	0.39	
(WY)	1957	1957	1964	1954	1989	1956	1989	1989	1977	1988	1936	1953	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1935 - 2002
ANNUAL MEAN	563	449	420
HIGHEST ANNUAL MEAN			1147
LOWEST ANNUAL MEAN			27.4
HIGHEST DAILY MEAN	9440	May 15	15400
LOWEST DAILY MEAN	4.2	Jan 13	2.0
ANNUAL SEVEN-DAY MINIMUM	4.3	Jan 7	2.5
MAXIMUM PEAK FLOW	---		17600
MAXIMUM PEAK STAGE	---		17.39
INSTANTANEOUS LOW FLOW	---		1.9
ANNUAL RUNOFF (INCHES)	12.33		9.83
10 PERCENT EXCEEDS	1140		806
50 PERCENT EXCEEDS	55		31
90 PERCENT EXCEEDS	8.7		5.8

e Estimated

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1972 to August 1973, October 1979 to October 1989, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)
OCT												
15...	1220	ENVIRONMENTAL	132	8.4	80	7.7	358	12.4	--	--	--	--
NOV												
14...	0820	ENVIRONMENTAL	12	9.4	87	8.1	436	10.6	200	59.1	11.6	6.94
DEC												
06...	1150	ENVIRONMENTAL	14	10.9	99	8.0	454	10.2	--	--	--	--
JAN												
15...	0845	ENVIRONMENTAL	13	14.9	105	8.1	316	.5	260	75.1	16.6	3.55
15...	0850	BLANK	--	--	--	--	--	--	--	.10	.021	.18
FEB												
11...	1300	ENVIRONMENTAL	101	13.3	100	7.9	387	3.1	--	--	--	--
MAR												
12...	0840	ENVIRONMENTAL	449	12.4	98	7.7	327	4.6	--	--	--	--
APR												
03...	0820	ENVIRONMENTAL	51	11.9	98	8.7	462	6.9	--	--	--	--
MAY												
14...	1630	ENVIRONMENTAL	15300	7.1	75	7.4	100	17.1	43	13.5	2.24	1.53
JUN												
03...	1259	BLANK	--	--	--	--	--	--	--	--	--	--
03...	1300	ENVIRONMENTAL	131	7.4	96	8.0	281	27.7	--	--	--	--
JUL												
09...	1325	ENVIRONMENTAL	24	8.2	113	8.1	316	31.0	130	40.9	7.75	4.59
AUG												
14...	0815	ENVIRONMENTAL	4	5.0	59	7.8	399	22.7	--	--	--	--
SEP												
04...	0900	ENVIRONMENTAL	5.8	5.3	62	7.8	392	22.9	--	--	--	--

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT													
15...	--	119	120	147	0	--	--	--	13	--	<.04	.61	.35
NOV													
14...	15.4	164	165	202	0	17.9	.3	43.6	<10	270	<.04	.60	<.05
DEC													
06...	--	169	170	207	0	--	--	--	<10	--	<.04	.36	<.05
JAN													
15...	18.2	185	186	227	0	16.1	.2	72.2	<10	318	<.04	.35	<.05
15...	.29	--	--	--	--	--	<.1	2.6	<10	<10	<.04	<.10	<.05
FEB													
11...	--	105	104	127	0	--	--	--	10	--	E.14	.90	E3.44
MAR													
12...	--	76	73	89	0	--	--	--	260	--	<.04	2.0	1.24
APR													
03...	--	136	135	152	0	--	--	--	12	--	<.04	.63	<.05
MAY													
14...	4.07	37	35	42	0	2.38	.2	4.9	316	--	.09	2.2	.81
JUN													
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
03...	--	101	99	121	0	--	--	--	42	--	<.04	.80	.68
JUL													
09...	7.27	118	118	144	0	7.62	.2	26.1	56	188	<.04	1.1	.41
AUG													
14...	--	146	145	177	0	--	--	--	<10	--	<.04	.67	<.05
SEP													
04...	--	170	170	207	0	--	--	--	11	--	<.04	.49	<.05

## FABIUS RIVER BASIN

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./ 100 mL) (31633)	COLI- FORM, FECAL, µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 15...	.010	.08	.05	.10	450	K830	530	--	--	--	--	--	--
NOV 14...	<.008	<.06	<.02	E.04	K11	K17	K26	46	51	1.0	<.04	<.1	<6
DEC 06...	<.008	<.06	<.02	<.06	K11	21	44	--	--	--	--	--	--
JAN 15...	<.008	<.06	<.02	<.06	<1	K1	K22	5	15	.7	<.04	<.1	<6
JAN 15...	<.008	<.06	<.02	<.06	--	--	--	7	9	<.2	<.04	<.1	<6
FEB 11...	E.036	E.05	E.03	.08	K6	K15	58	--	--	--	--	--	--
MAR 12...	.095	.09	.02	.43	450	620	700	--	--	--	--	--	--
APR 03...	<.008	<.06	<.02	E.05	K4	K9	36	--	--	--	--	--	--
MAY 14...	.085	.20	.14	.70	1400	2800	2600	951	6330	1.3	.04	.2	E4
JUN 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	.071	.08	E.01	.16	K49	200	170	--	--	--	--	--	--
JUL 09...	.015	E.04	.03	.14	K520	K780	110	6	721	1.8	<.04	<.1	<6
AUG 14...	<.008	<.06	<.02	.06	41	52	125	--	--	--	--	--	--
SEP 04...	<.008	E.03	<.02	E.04	41	38	67	--	--	--	--	--	--

[illegible]

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	BEN- FLUR- ALIN WAT FLT 0.7 µ	BUTYL- ATE, WATER, DISS, REC	CAR- BARYL WATER FLTRD 0.7 µ	CARBO- FURAN WATER FLTRD 0.7 µ		CHLOR- PYRIFOS DIS- SOLVED	CYANA- ZINE, WATER, DISS, REC	DCPA WATER FLTRD 0.7 µ	DEETHYL ATRA- ZINE, WATER, DISS, REC		DI- AZINON, DIS- SOLVED	DI- ELDRIN DIS- SOLVED	DISUL- FOTON WATER FLTRD 0.7 µ	EPTC WATER FLTRD 0.7 µ	ETHAL- FLUR- ALIN WAT FLT 0.7 µ
DATE	GF, REC (µg/L) (82673)	REC (µg/L) (04028)	GF, REC (µg/L) (82680)	GF, REC (µg/L) (82674)		(µg/L) (38933)	(µg/L) (04041)	GF, REC (µg/L) (82682)	REC (µg/L) (04040)		(µg/L) (39572)	(µg/L) (39381)	GF, REC (µg/L) (82677)	GF, REC (µg/L) (82668)	GF, REC (µg/L) (82663)
OCT 15...	--	--	--	--		--	--	--	--		--	--	--	--	--
NOV 14...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.068	<.005	<.005	<.02	<.002	<.009	<.002	<.009
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	<.010	<.002	<.041	<.020	<.005	E.015	<.003	E.048	<.005	<.005	<.02	<.002	<.009	<.002	<.009
APR 03...	<.010	<.002	<.041	<.020	<.005	E.016	<.003	E.066	<.005	<.005	<.02	<.002	<.009	<.002	<.009
MAY 14...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.392	E.003	<.005	<.02	<.002	<.009	<.002	<.009
JUN 03...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.002	<.009
03...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.449	<.005	<.005	<.02	<.002	<.009	<.002	<.009
JUL 09...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.536	<.005	<.005	<.02	<.002	<.009	<.002	<.009
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	ETHO- PROP WATER FLTRD 0.7 µ	FONOFO S WATER DISS REC	LINDANE DIS- SOLVED	LIN- URON WATER FLTRD 0.7 µ		MALA- THION, DIS- SOLVED	METHYL AZIN- PHOS WAT FLT 0.7 µ	METHYL PARA- THION WAT FLT 0.7 µ		METO- LACHLOR WATER DISSOLV	METRI- BUZIN SENCOR WATER DISSOLV	MOL- INATE WATER FLTRD 0.7 µ	NAPROP- AMIDE WATER FLTRD 0.7 µ	P,P' DDE DISSOLV	PARA- THION, DIS- SOLVED
DATE	GF, REC (µg/L) (82672)	REC (µg/L) (04095)	(µg/L) (39341)	GF, REC (µg/L) (82666)		(µg/L) (39532)	(µg/L) (82686)	GF, REC (µg/L) (82667)		(µg/L) (39415)	(µg/L) (82630)	GF, REC (µg/L) (82671)	GF, REC (µg/L) (82684)	(µg/L) (34653)	(µg/L) (39542)
OCT 15...	--	--	--	--		--	--	--	--	--	--	--	--	--	--
NOV 14...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.032	<.006	<.002	<.007	<.003	<.007	<.003	<.007
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	<.005	<.003	<.004	<.035	<.027	<.050	<.100	.035	<.006	<.002	<.007	<.003	<.007	<.003	<.010
APR 03...	<.005	<.003	<.004	<.035	<.027	<.050	<.100	.018	<.006	<.002	<.007	<.003	<.007	<.003	<.007
MAY 14...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	1.13	.011	<.002	<.007	<.003	<.007	<.003	<.010
JUN 03...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.003	<.010
03...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	2.03	<.006	<.002	<.007	<.003	<.007	<.003	<.010
JUL 09...	<.005	<.003	<.004	<.035	<.027	<.050	<.080	.590	.022	<.002	<.007	<.003	<.007	<.003	<.010
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## FABIUS RIVER BASIN

05500000 SOUTH FABIUS RIVER NEAR TAYLOR, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 14...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.038	<.02	<.034	<.02
DEC 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.037	E.01	<.034	<.02
APR 03...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.026	E.01	<.034	<.02
MAY 14...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	1.15	<.02	<.034	<.02
JUN 03...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUN 03...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	2.07	E.01	<.034	<.02
JUL 09...	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011	<.02	.145	<.02	<.034	<.02
AUG 14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 15...	--	--	--
NOV 14...	<.005	<.002	<.009
DEC 06...	--	--	--
JAN 15...	--	--	--
JAN 15...	--	--	--
FEB 11...	--	--	--
MAR 12...	<.005	<.002	E.004
APR 03...	<.005	<.002	<.009
MAY 14...	<.005	<.002	<.009
JUN 03...	<.005	<.002	<.009
JUN 03...	<.005	<.002	<.009
JUL 09...	<.005	<.002	<.009
AUG 14...	--	--	--
SEP 04...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.



05501000 NORTH RIVER AT PALMYRA, MO

LOCATION.--Lat 39°49'06", long 91°31'13", in SE ¼ SW ¼ sec.13, T.58 N., R.6 W., Marion County, Hydrologic Unit 07110004, on right bank 100 ft upstream from City Waterworks Dam, 1,000 ft upstream from upstream bridge on dual U.S. Highways 24 and 61, 0.5 mi north of Palmyra, and 7.0 mi upstream from mouth.

DRAINAGE AREA.--373 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1934 to current year.

GAGE.--Water-stage recorder. Datum of gage is 464.81 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to Oct. 1, 1945, nonrecording gage at bridge 1,000 ft downstream; Oct. 1, 1945, to June 22, 1951, nonrecording gage at present site and datum.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage prior to 1934, about 28.0 ft, from floodmarks, date unknown, at site 1,000 ft downstream, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	14	18	e12	1420	e60	45	324	174	21	8.1	5.1
2	4.5	41	17	e12	590	e58	43	241	133	18	7.5	4.5
3	3.9	44	16	9.2	374	e56	39	180	110	19	6.6	3.7
4	3.5	38	14	13	255	e49	34	166	93	20	6.0	3.1
5	157	e28	12	21	172	e51	33	123	82	17	5.4	2.8
6	e209	e21	11	28	158	100	33	2890	74	15	4.8	2.5
7	e184	e19	10	15	145	201	37	6340	68	25	4.3	2.2
8	e76	e18	10	10	109	159	184	2360	61	65	3.9	2.2
9	e48	e17	9.8	11	92	536	1000	16000	54	56	3.7	2.1
10	e43	e15	9.2	11	87	441	475	3040	54	37	3.7	9.5
11	e36	e15	8.8	11	79	293	263	10400	86	31	3.8	7.7
12	33	e16	10	10	71	196	256	12900	246	25	3.7	3.1
13	53	e16	17	11	87	146	192	5490	530	23	3.7	2.4
14	142	e16	26	13	81	121	142	2440	545	20	3.7	2.0
15	97	e16	27	17	67	107	119	1030	245	21	3.7	2.0
16	159	e16	28	16	58	94	102	635	171	17	4.4	2.0
17	180	e16	25	15	51	84	88	572	124	16	4.7	1.9
18	95	e15	22	14	46	76	77	619	100	15	3.9	1.9
19	54	e15	21	15	48	75	70	443	180	15	6.3	1.7
20	36	e16	19	15	188	75	67	357	92	14	5.8	1.5
21	25	e15	18	14	360	69	1050	302	66	14	6.0	1.6
22	19	e14	19	13	194	60	757	266	53	86	7.2	1.5
23	14	31	e25	13	135	55	437	238	45	143	10	1.4
24	13	110	e22	13	104	53	748	258	39	48	236	1.3
25	12	70	e20	13	84	53	1750	1100	37	23	96	1.2
26	11	43	e18	13	72	55	601	1060	36	19	44	1.2
27	9.6	29	e17	14	64	51	3600	879	32	14	24	1.2
28	8.7	19	e16	14	e62	51	4050	489	26	11	15	1.1
29	7.5	16	e14	14	---	51	1320	294	23	12	11	0.93
30	6.6	16	e14	276	---	52	673	271	22	11	8.2	0.82
31	6.4	---	e12	3890	---	49	---	279	---	8.5	6.5	---
MEAN	56.5	25.8	17.0	147	188	115	610	2322	120	28.4	18.1	2.54
MAX	209	110	28	3890	1420	536	4050	16000	545	143	236	9.5
MIN	3.5	14	8.8	9.2	46	49	33	123	22	8.5	3.7	0.82
IN.	0.17	0.08	0.05	0.46	0.52	0.36	1.82	7.18	0.36	0.09	0.06	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1935 - 2002, BY WATER YEAR (WY)

MEAN	148	176	166	184	322	440	488	502	312	241	104	121
MAX	1742	2639	1832	991	1720	2783	2691	2322	2296	2100	1357	1351
(WY)	1987	1986	1983	1969	1982	1973	1973	2002	1947	1993	1970	1970
MIN	0.00	0.00	0.23	0.66	0.92	6.54	24.8	15.5	4.77	0.52	0.00	0.17
(WY)	1957	1957	1957	1954	1954	1956	2000	1989	1936	1936	1936	1940

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1935 - 2002

ANNUAL MEAN	215	306	263
HIGHEST ANNUAL MEAN			748
LOWEST ANNUAL MEAN			22.1
HIGHEST DAILY MEAN	5520	Jun 6	32600
LOWEST DAILY MEAN	1.2	Aug 15	0.00
ANNUAL SEVEN-DAY MINIMUM	1.8	Aug 11	0.00
MAXIMUM PEAK FLOW	---		23000
MAXIMUM PEAK STAGE	---		25.00
INSTANTANEOUS LOW FLOW	---		0.71
ANNUAL RUNOFF (INCHES)	7.81		11.2
10 PERCENT EXCEEDS	383		439
50 PERCENT EXCEEDS	28		29
90 PERCENT EXCEEDS	4.1		3.9

e Estimated



## 05502300 NORTH FORK SALT RIVER AT HAGERS GROVE, MO

LOCATION.--Lat 39°49'48", long 92°13'47", in NE ¼ SW ¼ sec.15, T.58 N., R.12 W., Shelby County, Hydrologic Unit 07110005, at bridge on State Highway 151, 200 ft downstream from old channel carrying Bear Creek, 0.25 mi west of Hagers Grove, 2.5 mi upstream from Ten Mile Creek, and at mile 143.8.

DRAINAGE AREA.--365 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1974 to current year. Prior to October 1983 published as "Salt River at Hagers Grove, Mo.". September 1939 to August 1974, gage-height and miscellaneous measurements published by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 702.30 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1947 reached a stage of 19.7 ft, discharge 26,900 ft<sup>3</sup>/s, according to information furnished by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	17	11	e5.4	307	61	45	e292	112	13	6.9	3.8
2	17	14	10	e4.8	189	58	43	130	62	12	7.6	3.7
3	17	13	9.5	e4.4	e161	58	41	92	38	11	6.7	3.4
4	21	12	8.9	e4.1	e121	79	39	63	32	9.4	6.7	3.2
5	114	11	12	e5.1	e96	66	37	47	28	8.6	6.1	3.1
6	95	13	16	e6.0	e77	82	35	3380	25	10	6.2	3.0
7	59	13	14	e5.8	e68	157	36	4400	20	10	6.8	3.0
8	34	22	14	e4.9	62	150	59	788	20	31	6.1	2.9
9	20	17	15	e6.5	140	927	230	5020	20	35	5.7	3.0
10	18	16	13	e8.4	464	718	215	1110	18	29	5.4	2.8
11	18	17	13	e9.0	463	190	113	6130	20	209	5.3	3.0
12	15	18	14	e9.6	232	126	75	16600	489	141	5.2	3.0
13	26	16	15	e11	164	106	60	25000	954	210	6.1	3.1
14	27	15	36	e11	e120	95	53	4950	744	72	7.9	3.3
15	87	15	55	e11	e97	81	50	1270	249	45	5.6	3.0
16	639	15	38	e10	e79	68	45	577	167	25	5.2	3.1
17	159	15	e29	e7.8	e71	59	41	223	100	23	5.1	3.2
18	71	14	e23	e7.7	63	54	38	208	65	18	6.1	3.8
19	48	14	e18	e9.0	62	51	91	158	43	12	17	3.2
20	37	13	e16	e7.9	562	51	111	110	37	11	11	5.6
21	30	13	e14	e13	614	48	1390	91	34	8.1	6.8	4.7
22	28	12	e12	10	208	42	1030	94	30	6.3	29	4.1
23	23	10	e11	12	129	39	252	87	27	5.8	62	4.0
24	58	6.8	e10	11	108	40	418	500	24	6.6	36	4.2
25	48	7.5	e9.6	11	96	44	1430	4020	22	7.6	17	3.9
26	42	7.7	e9.0	12	81	40	353	1850	20	13	15	3.7
27	36	5.9	e11	15	64	40	1460	415	18	8.4	9.2	3.5
28	30	9.1	e11	13	60	45	e2980	640	16	5.5	5.6	3.4
29	25	6.3	e8.1	13	---	50	e1360	1410	15	41	4.9	3.3
30	21	7.7	e6.5	28	---	49	e374	382	14	10	4.7	3.1
31	19	---	e6.3	347	---	48	---	186	---	7.8	4.2	---
MEAN	61.1	12.9	15.8	20.5	177	120	417	2588	115	34.0	10.8	3.47
MAX	639	22	55	347	614	927	2980	25000	954	210	62	5.6
MIN	12	5.9	6.3	4.1	60	39	35	47	14	5.5	4.2	2.8
IN.	0.19	0.04	0.05	0.06	0.51	0.38	1.27	8.18	0.35	0.11	0.03	0.01

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

MEAN	176.8	276.0	192.4	126.8	350.1	416.7	464	642	281	372	87.9	105
MAX	1201	1426	1319	576	1599	1177	2036	2631	1074	3033	441	937
(WY)	1987	1986	1983	1999	1982	1979	1983	1995	1984	1993	1982	1993
MIN	2.02	4.40	2.20	1.13	5.18	22.5	8.20	10.4	3.55	4.01	3.90	3.41
(WY)	1989	1976	1977	1977	1989	1989	1989	1980	1988	1988	1984	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1974 - 2002
ANNUAL MEAN	261	301	291
HIGHEST ANNUAL MEAN			767
LOWEST ANNUAL MEAN			30.1
HIGHEST DAILY MEAN	9530	Feb 9	25000
LOWEST DAILY MEAN	3.4	Sep 15	2.8
ANNUAL SEVEN-DAY MINIMUM	4.5	Jan 1	3.0
MAXIMUM PEAK FLOW	---		42000 <sup>a</sup>
MAXIMUM PEAK STAGE	---		20.91
INSTANTANEOUS LOW FLOW	---		2.5
ANNUAL RUNOFF (INCHES)	9.70		11.19
10 PERCENT EXCEEDS	430		361
50 PERCENT EXCEEDS	33		22
90 PERCENT EXCEEDS	8.1		5.0

e Estimated

<sup>a</sup> From rating extended above 25,000 ft<sup>3</sup>/s, by indirect measurement.

## SALT RIVER BASIN

05502500 NORTH FORK SALT RIVER NEAR SHELBYNA, MO

LOCATION.--Lat 39°44'29", long 92°02'26", in SW 1/4 NE 1/4 sec.17, T.57 N., R.10 W., Shelby County, Hydrologic Unit 07110005, on right bank near downstream end of bridge on State Highway 15, 3.0 mi north of Shelbyna, 15.0 mi upstream from Black Creek, and at mile 122.3.

DRAINAGE AREA.--481 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1930 to February 1934, March 1934 to September 1972. March 1988 to current year. Prior to March 1988 published as "Salt River near Shelbyna, Mo.". Fragmentary record prior to October 1933. Monthly discharge only for period October 1933 to February 1934 published in WSP 1308.

GAGE.--Water-stage recorder and crest-stage gage with concrete control since Mar. 25, 1988. Datum of gage is 664.58 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 1, 1934, nonrecording gage at site 100 ft downstream at present datum; Mar. 1, 1934, to Nov. 2, 1962, water-stage recorder at site 175 ft downstream at present datum; Nov. 3, 1962, to Sept. 30, 1972, water-stage recorder at site 100 ft upstream at present datum; Oct. 1, 1972, to Sept. 30, 1979, gage-height records collected by U.S. Army Corps of Engineers, St. Louis District, at site 100 ft downstream; Oct. 1, 1979, to Sept. 1981, gage-height data collected by the U.S. Geological Survey at site 100 ft downstream.

REMARKS.--Records good except for discharges below 50 ft<sup>3</sup>/s, which are poor. Water is pumped from river at the gage by the city of Shelbyna. U. S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1928 reached a stage of 23.54 ft, from floodmarks, discharge 18,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	19	21	13	7.0	1000	57	43	419	148	17	e9.5	5.0
2	22	21	13	6.1	489	55	40	327	102	16	e7.8	4.8
3	28	21	12	5.6	e254	e53	35	232	77	16	e6.8	4.7
4	36	23	11	5.6	e201	e90	33	156	61	15	e6.0	4.4
5	252	23	11	6.5	e165	61	31	116	54	15	e5.4	4.1
6	290	21	12	7.3	e126	96	30	1840	45	15	e4.8	4.3
7	82	24	13	7.0	e99	251	31	6660	40	17	4.3	4.6
8	46	28	13	7.6	e85	245	119	6030	35	14	4.9	e4.1
9	30	27	13	8.6	117	802	446	6640	32	40	4.6	e3.6
10	28	28	14	10	357	1400	463	7000	29	66	4.6	e3.2
11	54	28	13	11	700	441	275	4820	31	50	4.4	e2.8
12	30	25	17	12	386	246	155	9530	670	254	4.2	3.9
13	59	21	18	12	252	174	110	17900	938	137	4.9	4.0
14	123	22	19	13	e185	132	89	20500	1540	76	9.0	5.2
15	60	24	50	13	e135	106	80	9040	397	36	6.5	8.6
16	959	22	46	13	99	83	69	2800	184	23	8.1	8.3
17	421	19	33	10	85	67	60	1140	112	18	7.3	9.0
18	153	22	25	10	70	57	53	803	78	43	7.1	10
19	76	22	21	12	68	55	57	602	61	16	9.4	9.6
20	48	20	18	9.9	471	55	210	398	48	12	14	12
21	36	22	16	14	965	51	1040	194	40	9.9	13	13
22	30	25	15	12	426	42	2210	136	34	11	13	9.8
23	28	25	14	15	225	39	606	121	30	10	95	8.0
24	28	21	13	15	152	38	313	362	28	6.9	85	6.3
25	96	14	12	13	114	40	1760	2980	26	6.3	26	7.1
26	53	14	12	14	83	41	695	4840	24	8.9	16	6.0
27	44	15	14	14	e65	40	1420	1460	22	9.5	14	5.4
28	32	12	14	16	54	43	5540	498	20	7.8	11	5.6
29	29	17	9.8	15	---	52	5410	1840	19	11	7.6	6.7
30	24	14	8.8	115	---	54	1130	689	18	27	6.4	8.7
31	22	---	8.1	1060	---	48	---	262	---	11	6.1	---
MEAN	104	21.4	16.8	48.1	265	162	752	3559	165	32.8	13.8	6.43
MAX	959	28	50	1060	1000	1400	5540	20500	1540	254	95	13
MIN	19	12	8.1	5.6	54	38	30	116	18	6.3	4.2	2.8
IN.	0.25	0.05	0.04	0.12	0.57	0.39	1.74	8.53	0.38	0.08	0.03	0.01

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	143	173	146	214	382	452	542	565	438	334	119	156
MAX	1208	1327	835	1319	1475	1417	1944	3559	4171	4119	1214	1831
(WY)	1999	1993	1972	1965	1997	1948	1944	2002	1947	1993	1970	1970
MIN	0.00	0.00	0.00	0.01	1.80	6.41	7.24	12.2	2.93	0.00	0.00	0.00
(WY)	1953	1954	1954	1954	1934	1956	1989	2000	1988	1934	1936	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			FOR PERIOD OF RECORD		
ANNUAL MEAN	405			432			308		
HIGHEST ANNUAL MEAN							1037		
LOWEST ANNUAL MEAN							36.2		
HIGHEST DAILY MEAN	9530			20500			20500		
LOWEST DAILY MEAN	5.9			2.8			0.00		
ANNUAL SEVEN-DAY MINIMUM	6.3			3.7			0.00		
MAXIMUM PEAK FLOW	---			24600			24600		
MAXIMUM PEAK STAGE	---			27.29			27.40		
INSTANTANEOUS LOW FLOW	---			2.7			0.00		
ANNUAL RUNOFF (INCHES)	11.42			12.20			8.69		
10 PERCENT EXCEEDS	773			632			677		
50 PERCENT EXCEEDS	49			28			32		
90 PERCENT EXCEEDS	13			6.6			2.0		

e Estimated

05503800 CROOKED CREEK NEAR PARIS, MO

LOCATION.--Lat 39°35'06", long 91°59'36", near NW corner S 1/2 sec.2, T.55 N., R.10 W., Monroe County, Hydrologic Unit 07110005, on right bank downstream from county road bridge, 7.0 mi north of Paris, 1.4 mi north of State Route 15, and at mile 8.9.

DRAINAGE AREA.--80.0 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1979 to current year. March 1966 to October 1979 published by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 650.00 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 8, 1967, wire-weight gage and Nov. 9, 1967, to Sept. 30, 1979, recording gage at datum 50 ft lower.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 1973 reached a stage of 15.53 ft; discharge, 12,100 ft<sup>3</sup>/s, according to information furnished by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.50	0.77	0.94	0.58	567	8.6	7.2	29	4.9	0.58	0.64	0.24
2	0.41	0.97	0.85	0.61	136	9.6	6.8	23	4.0	0.49	0.40	0.15
3	0.32	0.88	0.74	0.56	47	9.8	6.4	18	3.2	0.43	0.26	0.10
4	0.27	0.85	0.68	0.53	31	9.2	6.0	14	2.6	0.39	0.19	0.06
5	198	0.75	0.68	0.59	22	9.8	5.8	12	2.2	0.34	0.13	0.03
6	230	0.66	0.66	0.70	18	26	5.6	1100	2.0	0.30	0.08	0.01
7	31	0.75	0.64	0.70	14	63	5.8	1850	1.7	0.27	0.05	0.00
8	9.8	0.81	0.59	0.75	12	54	22	1250	1.4	0.24	0.02	0.00
9	4.7	0.76	0.53	0.81	12	183	156	3280	1.4	0.23	0.02	0.00
10	4.5	0.80	0.46	0.82	12	167	90	1070	1.2	4.9	0.01	0.00
11	11	0.83	0.45	0.84	12	45	34	1310	2.7	9.5	0.00	0.00
12	16	0.77	0.52	0.83	13	27	20	2130	40	8.3	0.00	0.00
13	19	0.73	0.52	0.75	14	21	14	885	254	9.7	0.00	0.00
14	50	0.74	0.51	0.82	11	17	11	86	195	3.8	0.00	0.00
15	33	0.74	0.49	0.76	10	15	10	37	30	2.1	0.00	0.00
16	97	0.71	0.57	0.60	9.1	13	8.6	24	12	1.4	0.00	0.00
17	51	0.65	0.89	0.50	8.5	11	7.6	24	7.5	0.90	0.00	0.00
18	15	0.60	1.5	0.47	8.1	10	6.5	34	5.6	1.8	0.07	0.00
19	7.3	0.60	1.2	0.56	8.6	9.6	5.9	19	4.6	1.5	0.12	0.00
20	4.2	0.53	0.98	0.58	88	10	6.9	13	3.6	0.76	0.19	0.00
21	3.1	0.47	1.1	0.66	171	10	409	9.5	2.9	0.44	0.36	0.00
22	2.2	0.43	1.3	0.64	51	9.3	207	7.6	2.3	0.50	0.39	0.00
23	1.7	0.39	1.2	0.61	28	8.7	56	6.5	1.9	66	37	0.00
24	1.8	0.77	0.99	0.70	20	8.3	31	7.7	1.5	16	13	0.00
25	1.7	1.4	0.77	0.65	16	8.2	27	134	1.3	5.3	5.0	0.00
26	1.2	1.4	0.63	0.58	13	8.1	18	206	1.1	5.0	5.4	0.00
27	0.72	1.2	0.61	0.54	11	7.9	659	33	1.5	7.2	2.7	0.00
28	0.53	0.95	0.66	0.49	9.2	7.6	663	16	1.4	2.7	1.5	0.00
29	0.73	0.89	0.57	0.46	---	7.5	156	11	0.90	1.8	0.95	0.00
30	0.80	0.94	0.41	48	---	7.6	45	8.1	0.72	1.5	0.58	0.00
31	0.66	---	0.45	700	---	7.4	---	6.2	---	1.1	0.37	---
MEAN	25.8	0.79	0.74	24.7	49.0	26.1	90.2	440	19.8	5.02	2.24	0.02
MAX	230	1.4	1.5	700	567	183	663	3280	254	66	37	0.24
MIN	0.27	0.39	0.41	0.46	8.1	7.4	5.6	6.2	0.72	0.23	0.00	0.00
IN.	0.37	0.01	0.01	0.36	0.64	0.38	1.26	6.35	0.28	0.07	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

MEAN	25.6	58.8	51.0	33.4	81.7	81.4	90.7	150	72.9	75.8	23.0	35.8
MAX	321	550	247	162	359	244	319	669	250	554	223	510
(WY)	1987	1986	1983	1999	1985	1998	1983	1995	1998	1993	1993	1993
MIN	0.00	0.00	0.00	0.00	0.00	0.07	0.16	1.53	0.03	0.00	0.00	0.00
(WY)	1980	1981	1989	1989	1989	1989	1989	1988	1988	1988	1988	1983

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002	
ANNUAL MEAN	63.8		57.5		64.9	
HIGHEST ANNUAL MEAN					179	
LOWEST ANNUAL MEAN					7.38	
HIGHEST DAILY MEAN	2130		Jan 30		7150	
LOWEST DAILY MEAN	0.03		Aug 14		0.00	
ANNUAL SEVEN-DAY MINIMUM	0.06		Aug 14		0.00	
MAXIMUM PEAK FLOW	---		3850		May 9	
MAXIMUM PEAK STAGE	---		10.35		May 9	
INSTANTANEOUS LOW FLOW	---		0.00		Aug 10-18, Sep 6-30	
ANNUAL RUNOFF (INCHES)	10.8		9.75		11.02	
10 PERCENT EXCEEDS	92		50		89	
50 PERCENT EXCEEDS	4.6		1.5		3.2	
90 PERCENT EXCEEDS	0.50		0.04		0.00	

e Estimated

## SALT RIVER BASIN

05504800 SOUTH FORK SALT RIVER ABOVE SANTA FE, MO

LOCATION.--Lat 39°19'34", long 91°50'02", in SE ¼ SE ¼ sec.31, T.53 N., R.8 W., Audrain County, Hydrologic Unit 07110006, on left bank near downstream side of bridge on county road, 4.0 mi southwest of Santa Fe, 1.0 mi upstream from Littleby Creek, and at mile 104.2 above mouth of Salt River.

DRAINAGE AREA.--233 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1940 to current year. Published as "near Santa Fe" (05504900) October 1968 to September 1975 and as "at Santa Fe" (05505000) February 1940 to September 1968 and October 1975 to September 1986.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 644.87 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 5, 1940, nonrecording gage; Feb. 5, 1940, to Sept. 30, 1968, and Oct. 1, 1975 to Sept. 30, 1986, water-stage recorder 8.0 mi downstream at datum 613.05; Oct. 1, 1968, to Sept. 30, 1975, water-stage recorder, 1.0 mi downstream at datum 5.78 ft lower.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.4	10	46	7.2	2420	19	38	161	67	11	4.7	4.1
2	6.4	12	53	6.4	409	24	35	126	50	9.1	5.6	3.9
3	6.4	13	34	5.5	184	48	31	104	42	8.6	4.1	3.5
4	6.7	21	28	5.5	120	67	28	78	37	8.4	2.5	3.0
5	13	14	24	6.3	82	65	26	63	35	11	5.1	1.8
6	30	13	20	6.7	61	171	24	1680	35	6.8	3.9	1.0
7	26	13	16	6.6	51	214	23	5060	34	14	1.7	0.82
8	23	12	14	6.8	49	141	40	5190	33	35	0.75	3.2
9	15	11	12	7.3	41	110	152	4300	31	18	3.6	3.4
10	17	11	11	7.5	38	135	155	1670	32	13	2.9	3.1
11	29	11	10	7.8	36	94	93	1250	216	195	2.3	3.2
12	93	10	11	7.8	34	65	64	1580	1230	360	2.4	2.3
13	219	11	15	8.1	32	54	50	2940	1560	84	2.3	2.2
14	229	11	69	8.1	29	49	41	989	219	34	2.0	3.8
15	152	11	66	8.1	26	44	37	293	96	22	3.6	4.9
16	147	12	55	8.0	24	41	33	195	59	16	5.3	16
17	166	12	41	7.8	22	36	30	805	43	14	3.5	9.3
18	81	11	68	7.4	21	32	32	2820	34	17	4.9	6.7
19	42	12	51	7.8	21	32	33	701	28	13	11	5.6
20	27	12	33	7.8	37	47	403	233	24	11	17	4.9
21	21	15	26	8.2	60	48	1980	149	22	9.9	15	4.2
22	17	14	23	8.0	53	45	1550	110	20	8.5	12	3.8
23	17	12	25	8.6	39	37	302	90	18	8.0	33	9.2
24	17	23	28	9.1	32	33	163	77	16	43	26	4.1
25	40	67	23	10	27	41	109	70	16	21	15	2.8
26	35	73	17	10	25	83	79	67	15	12	11	2.3
27	28	42	14	9.6	23	82	2010	62	16	10	7.9	2.4
28	21	30	13	9.1	20	71	3920	55	14	9.3	6.8	2.8
29	17	24	11	8.5	---	56	1150	50	13	7.7	5.7	3.1
30	15	30	9.6	83	---	48	252	248	12	5.0	5.0	3.2
31	12	---	8.3	3290	---	43	---	137	---	3.8	4.6	---
MEAN	50.8	19.1	28.2	116	143	66.9	429	1011	136	33.5	7.46	4.15
MAX	229	73	69	3290	2420	214	3920	5190	1560	360	33	16
MIN	6.4	10	8.3	5.5	20	19	23	50	12	3.8	0.75	0.82
IN.	0.25	0.09	0.14	0.57	0.64	0.33	2.06	5.01	0.65	0.17	0.04	0.02

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	MEAN	123	127	127	139	227	300	334	312	244	201	56.2	128
MAX	1646	1378	1447	792	1031	1715	1734	2238	1307	2415	544	1830	
(WY)	1942	1986	1983	1974	1985	1973	1944	1943	1942	1969	1982	1993	
MIN	0.01	0.36	0.58	1.18	1.91	2.74	3.42	5.92	3.28	1.31	0.46	0.22	
(WY)	1954	1954	1964	1963	1954	1954	2000	1980	1988	1944	1964	1960	

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1940 - 2002

ANNUAL MEAN	215	171	193
HIGHEST ANNUAL MEAN			509
LOWEST ANNUAL MEAN			10.7
HIGHEST DAILY MEAN	5370	Feb 25	24000
LOWEST DAILY MEAN	3.9	Aug 11,12	0.00
ANNUAL SEVEN-DAY MINIMUM	4.2	Jan 1	0.00
MAXIMUM PEAK FLOW	---		5930
MAXIMUM PEAK STAGE	---		17.33
INSTANTANEOUS LOW FLOW	---		0.56
ANNUAL RUNOFF (INCHES)	12.55		9.96
10 PERCENT EXCEEDS	342		188
50 PERCENT EXCEEDS	26		23
90 PERCENT EXCEEDS	7.6		4.2
			1.6

05506100 LONG BRANCH NEAR SANTA FE, MO

LOCATION.--Lat 39°21'21", long 91°50'03", in NE ¼ SE ¼ SE ¼ sec. 19, T.53 N., R.8 W., Monroe County, Hydrologic Unit 07110006, on left bank on west side of concrete ford on County Road 614, 2 mi southwest of Santa Fe.

DRAINAGE AREA.--180 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1994 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 625.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges and those below 10 ft<sup>3</sup>/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.2	3.0	13	1.3	1350	15	14	82	16	2.1	0.02	0.67
2	1.1	2.6	8.2	0.53	553	19	12	74	14	1.8	0.00	0.50
3	0.94	2.6	5.4	0.82	120	21	11	50	12	1.6	0.25	0.26
4	0.76	2.2	6.0	0.65	70	19	11	38	9.9	1.4	0.10	0.20
5	4.7	2.1	5.1	0.67	49	23	9.8	31	8.3	1.3	0.00	0.15
6	15	2.1	3.7	0.70	39	69	9.1	2560	7.8	1.0	0.00	0.12
7	38	2.2	3.2	0.68	34	102	10	2870	6.9	4.1	0.00	0.10
8	31	1.9	2.6	0.73	31	87	33	1990	6.1	5.6	0.00	0.08
9	21	1.6	2.1	0.93	27	107	136	3670	5.4	3.3	0.00	0.04
10	16	1.4	1.6	0.94	27	133	103	1440	6.9	2.7	0.00	0.02
11	13	1.3	1.5	1.1	25	99	69	2670	260	20	0.00	0.00
12	50	1.2	1.9	1.3	22	65	44	3030	882	39	0.00	0.00
13	73	0.75	3.7	1.4	20	47	31	3670	683	11	0.03	0.00
14	81	0.67	12	1.6	19	37	23	e1110	144	5.0	0.01	0.00
15	64	0.67	11	1.6	18	32	18	e113	71	2.7	0.00	0.00
16	90	0.67	8.1	1.6	17	29	15	e64	39	1.9	0.00	0.00
17	88	0.81	9.9	1.5	15	25	13	e192	25	23	0.25	0.00
18	59	0.99	11	1.5	15	22	12	e500	18	2.6	0.47	0.00
19	38	0.94	8.5	1.6	15	22	13	e111	14	0.43	0.07	0.00
20	25	0.83	6.7	1.6	19	25	35	e42	11	0.20	0.03	0.00
21	17	0.71	6.0	1.6	26	25	1490	e27	8.8	0.13	0.03	0.00
22	11	0.67	6.3	1.6	28	22	1100	e24	7.0	0.08	0.02	0.00
23	6.8	0.72	5.1	2.0	25	20	464	e24	6.0	0.06	5.5	0.00
24	5.0	42	4.0	2.1	22	20	102	e23	5.1	0.03	5.9	0.00
25	5.0	23	3.4	2.1	21	21	59	e107	4.6	0.03	32	0.00
26	3.7	9.5	3.5	2.1	20	21	42	e117	3.9	0.03	16	0.00
27	2.3	15	3.2	2.1	18	21	2210	e29	3.2	0.03	11	0.00
28	2.1	9.9	2.6	2.1	16	22	2870	e23	2.9	0.03	4.9	0.00
29	2.1	6.7	2.3	2.1	---	20	1140	e22	2.6	0.03	2.2	0.00
30	2.0	9.0	1.7	120	---	16	232	20	2.4	0.03	1.3	0.00
31	3.5	---	1.5	3320	---	15	---	19	---	0.02	0.92	---
MEAN	24.9	4.92	5.32	112	95.0	39.4	344	798	76.2	4.23	2.61	0.07
MAX	90	42	13	3320	1350	133	2870	3670	882	39	32	0.67
MIN	0.76	0.67	1.5	0.53	15	15	9.1	19	2.4	0.02	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	MEAN	45.6	42.6	11.0	182	322	144	249	379	201	155	65.0	8.49
MAX	266	246	32.0	534	1053	487	636	1062	514	943	254	38.6	
(WY)	1999	1999	1999	1999	1997	1998	1999	1995	1998	1998	2000	1998	
MIN	0.01	0.00	0.61	0.11	17.6	13.1	1.25	16.4	23.2	4.23	0.04	0.00	
(WY)	2000	2000	2000	2000	1996	2000	2000	2000	1996	2002	1999	1999	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1994 - 2002
ANNUAL MEAN	157	126	142
HIGHEST ANNUAL MEAN			237
LOWEST ANNUAL MEAN			35.8
HIGHEST DAILY MEAN	4410	Jan 30	12400
LOWEST DAILY MEAN	0.00	Aug 22	0.00
ANNUAL SEVEN-DAY MINIMUM	0.15	Aug 16	0.00
MAXIMUM PEAK FLOW	---		5740
MAXIMUM PEAK STAGE	---		12.72
INSTANTANEOUS LOW FLOW	---		0.00
10 PERCENT EXCEEDS	213		102
50 PERCENT EXCEEDS	11		6.7
90 PERCENT EXCEEDS	0.76		0.03

e Estimated

## SALT RIVER BASIN

05506350 MIDDLE FORK SALT RIVER NEAR HOLLIDAY, MO

LOCATION.--Lat 39°31'32", long 92°07'40", in NE 1/4 SW 1/4 NW 1/4 sec. 27, T. 55 N., R. 11 W., Monroe County, Hydrologic Unit 07110006, on right bank, downstream side of Highway A bridge, approximately 2.1 mi north of Holliday.

DRAINAGE AREA.--313 mi<sup>2</sup>.

PERIOD OF RECORD.--Dec. 17, 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 651.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.1	20	10	7.6	2060	35	23	405	77	11	19	3.4
2	4.7	17	9.3	6.7	936	37	22	193	62	10	14	3.2
3	4.2	11	8.4	6.3	333	e41	20	122	51	10	8.9	2.7
4	7.9	10	7.5	6.1	222	e44	18	92	42	9.7	5.9	2.4
5	527	9.8	10	6.2	e182	e47	17	72	36	9.3	4.1	2.4
6	778	9.6	11	6.3	e149	145	16	3270	34	9.5	3.4	2.4
7	152	9.7	12	6.5	121	186	16	4700	30	14	3.2	2.3
8	89	9.8	12	6.3	84	143	102	5370	26	13	2.5	2.0
9	52	10	11	6.5	61	773	339	8730	23	9.2	2.7	1.7
10	38	9.6	10	6.9	58	806	244	7380	21	10	2.6	1.2
11	30	9.5	10	7.5	62	476	154	5450	24	23	2.5	2.3
12	45	9.2	12	7.8	91	222	108	5770	212	245	2.4	1.6
13	55	9.4	12	7.7	110	120	69	6330	406	243	2.7	2.1
14	63	9.2	19	8.2	72	92	52	4740	736	189	3.0	2.0
15	48	9.6	19	7.8	52	78	44	3140	362	55	3.0	3.5
16	200	9.6	20	7.5	43	64	38	623	130	23	4.0	2.6
17	291	9.6	20	7.3	37	54	33	247	61	14	5.0	2.4
18	157	9.7	20	6.7	33	47	29	286	39	11	7.0	2.5
19	73	10	22	6.6	36	44	27	193	32	8.7	15	2.5
20	48	10	21	6.3	334	44	28	138	27	7.5	15	5.0
21	37	10	17	6.3	514	41	1780	108	22	6.3	10	2.6
22	29	9.7	16	5.7	286	35	1760	91	19	5.6	7.3	3.4
23	26	10	14	6.7	180	32	807	80	16	24	10	2.2
24	23	15	13	8.0	106	30	351	83	14	13	13	5.1
25	19	15	12	7.9	75	31	139	584	14	11	13	5.2
26	15	16	11	6.9	57	29	107	1720	13	9.8	26	3.8
27	14	14	10	6.8	45	27	1950	1550	11	30	14	3.1
28	15	13	9.9	6.7	38	27	2950	795	10	29	9.6	2.9
29	15	13	9.4	6.6	---	27	2090	170	11	15	6.5	2.7
30	10	12	8.8	148	---	27	1570	108	11	9.3	5.0	3.3
31	16	---	8.2	2440	---	25	---	99	---	6.9	4.0	---
MEAN	93.2	11.3	13.1	90.0	228	124	497	2021	85.7	35.0	7.88	2.82
MAX	778	20	22	2440	2060	806	2950	8730	736	245	26	5.2
MIN	4.2	9.2	7.5	5.7	33	25	16	72	10	5.6	2.4	1.2

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	MEAN	38.7	30.4	8.16	291	448	260	380	731	350	103	31.2	16.0
MAX	93.2	78.8	13.1	611	1136	490	771	2021	978	237	99.9	35.2	
(WY)	2002	2001	2002	1999	2001	1999	1999	2002	2001	1999	2000	2001	
MIN	6.42	1.12	5.24	2.12	29.7	35.0	3.89	21.9	72.3	35.0	2.64	2.82	
(WY)	2000	2000	2001	2000	2000	2000	2000	2000	1999	2002	1999	2002	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR				FOR 2002 WATER YEAR				WATER YEARS 1999 - 2002			
ANNUAL MEAN	298				269				203			
HIGHEST ANNUAL MEAN									296			
LOWEST ANNUAL MEAN									44.5			
HIGHEST DAILY MEAN	5480				Jun 7				8730			
LOWEST DAILY MEAN	2.7				Jan 4				0.22			
ANNUAL SEVEN-DAY MINIMUM	3.3				Jan 1				0.46			
MAXIMUM PEAK FLOW	---				9360				May 9			
MAXIMUM PEAK STAGE	---				21.53				May 9			
INSTANTANEOUS LOW FLOW	---				1.2				Sep 10			
10 PERCENT EXCEEDS	621				344				252			
50 PERCENT EXCEEDS	45				17				14			
90 PERCENT EXCEEDS	8.3				3.7				2.2			

e Estimated



05506800 ELK FORK SALT RIVER NEAR MADISON, MO

LOCATION.--Lat 39°26'05", long 92°10'04", in SE ¼ NE ¼ SW ¼ sec.29, T.54 N., R.11 W., Monroe County, Hydrologic Unit 07110006, on downstream side and 25 ft to the left of bridge on State Highway AA, 500 ft downstream from Allen Creek, 3.5 mi southeast of Madison, and at mile 29.8.

DRAINAGE AREA.--200 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WRD MO 1973: 1970(M).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 690.16 ft above National Geodetic Vertical Datum of 1929 (Missouri State Highway and Transportation Commission bench mark).

REMARKS.--Records fair except discharges below 10 ft<sup>3</sup>/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 9, 1967, reached a stage of 31.25 ft, from floodmark, discharge 33,300 ft<sup>3</sup>/s, by contracted-opening method. Flood in 1871 reached nearly the same stage, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.0	5.6	7.3	3.7	1620	16	16	236	21	5.3	11	1.7
2	3.7	6.4	8.4	3.3	261	21	16	253	17	4.8	7.9	1.5
3	4.0	6.0	7.8	3.0	129	21	14	123	15	4.3	5.5	1.2
4	4.5	5.3	7.5	3.0	82	24	13	79	13	4.5	4.4	1.0
5	440	5.0	6.8	3.4	56	26	12	58	12	4.5	3.8	0.96
6	374	5.3	6.8	3.9	44	141	11	3180	13	4.1	3.4	0.97
7	94	5.3	6.9	4.1	38	197	12	4460	13	3.7	3.0	1.1
8	38	5.2	7.8	4.1	32	128	77	1770	11	5.0	2.8	1.3
9	16	4.9	7.0	4.5	29	665	249	4890	8.8	7.8	2.5	1.4
10	12	5.0	6.0	4.9	29	505	183	2990	7.9	5.9	2.3	1.1
11	13	4.7	5.4	5.0	36	145	87	2240	87	6.9	2.1	1.0
12	17	4.4	5.9	5.1	36	91	59	2620	878	12	2.2	0.64
13	23	4.6	7.0	5.2	28	68	44	1910	424	22	2.7	0.96
14	35	4.6	14	5.4	23	55	36	486	151	11	2.6	1.6
15	53	4.7	17	5.0	20	46	30	166	54	6.8	2.8	2.1
16	249	5.0	12	4.8	18	39	26	118	31	5.1	3.6	2.1
17	147	4.6	11	4.8	16	33	22	282	21	4.2	2.8	2.4
18	59	4.7	11	4.6	14	30	19	720	16	3.7	4.9	2.3
19	31	5.9	11	4.6	17	28	18	197	13	3.9	8.1	1.4
20	18	5.7	9.6	4.7	98	29	18	96	11	4.0	20	1.0
21	12	6.5	8.6	4.8	180	27	1800	64	9.7	3.6	16	1.8
22	9.3	6.3	8.6	5.2	91	24	1440	49	8.6	4.0	8.6	1.9
23	8.7	5.5	7.9	5.9	56	23	231	41	7.7	76	91	1.5
24	8.0	9.1	7.2	6.0	42	22	124	39	7.1	32	90	1.4
25	10	10	6.4	5.6	32	23	82	130	6.9	8.6	44	1.9
26	8.2	15	5.7	5.5	25	23	57	158	6.9	9.7	12	2.4
27	7.6	13	5.4	5.2	19	21	1720	62	6.3	358	4.9	2.1
28	6.2	9.9	5.2	5.2	17	20	3800	45	6.1	60	2.7	1.8
29	5.8	8.8	5.0	5.0	---	19	572	42	5.7	24	1.8	3.0
30	5.7	9.0	4.7	102	---	21	175	28	5.4	55	1.4	2.9
31	5.5	---	4.1	2580	---	18	---	25	---	24	1.6	---
MEAN	55.6	6.53	7.90	90.9	110	82.2	365	889	62.9	25.3	12.0	1.61
MAX	440	15	17	2580	1620	665	3800	4890	878	358	91	3.0
MIN	3.7	4.4	4.1	3.0	14	16	11	25	5.4	3.6	1.4	0.64
IN.	0.32	0.04	0.05	0.52	0.57	0.47	2.04	5.13	0.35	0.15	0.07	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

	100	127	128	124	210	262	333	279	198	158	48.2	105
MEAN	100	127	128	124	210	262	333	279	198	158	48.2	105
MAX	1077	1248	750	533	935	1154	1651	1554	1005	1409	268	1381
(WY)	1987	1986	1983	1974	1985	1973	1973	1995	1969	1981	2000	1993
MIN	0.25	1.24	0.94	0.95	2.07	3.02	4.76	10.0	1.61	1.06	0.82	0.63
(WY)	1981	1981	1989	1977	1989	1981	2000	1992	1988	1988	1980	1988

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1969 - 2002

	201	143	172
ANNUAL MEAN	201	143	172
HIGHEST ANNUAL MEAN			380
LOWEST ANNUAL MEAN			23.6
HIGHEST DAILY MEAN	6540	Jan 30	4890
LOWEST DAILY MEAN	2.6	Aug 22	0.64
ANNUAL SEVEN-DAY MINIMUM	3.1	Aug 8	1.1
MAXIMUM PEAK FLOW	---		6050
MAXIMUM PEAK STAGE	---		18.71
INSTANTANEOUS LOW FLOW	---		0.44
ANNUAL RUNOFF (INCHES)	13.66		9.71
10 PERCENT EXCEEDS	271		170
50 PERCENT EXCEEDS	19		10
90 PERCENT EXCEEDS	4.7		2.7

## SALT RIVER BASIN

05507600 LICK CREEK AT PERRY, MO

LOCATION.--Lat 39°25'53", long 91°40'34", near center of NW ¼ SW ¼ sec.27, T.54 N., R.7 W., Ralls County, Hydrologic Unit 07110007, on right bank and downstream side of State Highway 154 bridge, 0.1 mi west of Perry, and at mile 11.9.

DRAINAGE AREA.--104 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1979 to current year. Prior to October 1979 gages were maintained and operated by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 625.00 ft above National Geodetic Vertical Datum of 1929. Prior to November 1967, nonrecording gage at same site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Oct. 12, 1969, reached a stage of 26.24 ft, as determined by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.36	3.8	13	1.4	558	5.2	6.9	85	6.2	0.55	0.01	0.03
2	0.27	4.8	13	1.2	94	8.6	6.5	44	4.8	0.42	0.00	0.02
3	0.23	5.4	9.0	1.0	42	15	5.9	19	3.8	0.31	0.00	0.00
4	0.13	5.8	6.2	0.99	28	13	5.2	13	3.1	0.23	0.00	0.00
5	6.3	6.2	4.8	1.0	19	16	4.7	9.9	2.8	0.21	0.00	0.00
6	9.4	5.7	4.2	1.2	14	81	4.5	2840	2.5	0.22	0.00	0.00
7	3.1	5.4	3.2	1.2	11	69	4.6	3580	2.2	49	0.00	0.00
8	1.9	5.1	2.6	1.1	9.3	39	52	1030	1.8	7.9	0.00	0.00
9	1.2	4.5	2.2	1.2	8.6	47	83	2330	1.5	2.5	0.00	0.00
10	1.9	4.8	2.0	1.4	8.4	41	35	210	1.4	1.6	0.00	0.00
11	6.1	5.0	1.7	1.4	7.5	23	19	1910	102	1.2	0.00	0.00
12	47	4.9	2.1	1.4	7.0	16	13	1450	1290	0.89	0.00	0.00
13	59	4.8	3.1	1.2	6.3	13	10	1610	1530	2.1	0.00	0.00
14	51	4.8	16	1.3	5.7	11	8.8	534	199	1.2	0.00	0.00
15	22	4.9	28	1.6	5.3	10	7.8	e24	49	0.67	0.00	0.03
16	42	4.9	18	1.5	5.1	9.4	6.7	e69	26	0.40	0.00	0.00
17	26	4.5	13	1.5	4.8	8.4	5.5	e110	15	2.7	0.00	0.00
18	13	4.3	21	1.5	4.5	7.6	5.0	e274	9.2	1.7	0.05	0.00
19	7.8	4.6	17	1.4	5.0	7.8	5.5	e44	6.6	0.82	0.02	0.00
20	5.0	4.5	9.5	1.4	45	10	101	e19	4.9	0.61	0.03	0.02
21	3.4	4.7	6.4	1.4	45	12	1290	e14	3.7	0.51	0.04	0.00
22	2.7	4.3	9.9	1.3	22	10	262	e13	2.8	0.41	0.04	0.00
23	3.8	3.9	17	1.9	14	8.5	52	e12	2.2	0.31	19	0.00
24	5.2	29	16	1.8	10	7.9	27	e16	1.8	0.20	31	0.00
25	5.7	40	8.8	1.7	8.3	8.9	16	15	1.8	0.12	5.9	0.00
26	5.5	21	5.5	1.6	7.6	9.5	11	11	1.5	0.08	1.8	0.00
27	4.7	12	3.9	1.5	6.1	11	2490	9.1	1.2	0.05	0.76	0.00
28	4.4	7.7	3.2	1.1	5.4	10	2080	141	0.93	0.05	0.35	0.00
29	3.9	6.0	2.6	1.6	---	10	113	36	0.79	0.03	0.16	0.00
30	3.8	9.2	2.0	34	---	9.0	45	15	0.60	0.02	0.08	0.00
31	3.8	---	1.7	2970	---	7.8	---	8.8	---	0.02	0.05	---
MEAN	11.3	7.88	8.60	98.2	36.0	17.9	226	532	109	2.48	1.91	0.00
MAX	59	40	28	2970	558	81	2490	3580	1530	49	31	0.03
MIN	0.13	3.8	1.7	0.99	4.5	5.2	4.5	8.8	0.60	0.02	0.00	0.00
IN.	0.13	0.08	0.10	1.09	0.36	0.20	2.42	5.90	1.17	0.03	0.02	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

MEAN	14.1	79.3	68.0	52.9	116	86.1	117	134	73.7	82.0	28.2	41.6
MAX	95.9	652	442	190	441	340	541	532	300	482	143	748
(WY)	1987	1986	1983	2001	1997	1984	1994	2002	1998	1981	1982	1993
MIN	0.00	0.00	0.05	0.00	1.67	0.41	2.15	1.27	0.04	0.03	0.00	0.00
(WY)	1989	2000	1980	1980	1981	1981	2000	1988	1988	1994	1994	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1980 - 2002
ANNUAL MEAN	98.5	88.1	74.0
HIGHEST ANNUAL MEAN			188
LOWEST ANNUAL MEAN			15.1
HIGHEST DAILY MEAN	4090	3580	7880
LOWEST DAILY MEAN	0.00 Aug 7,20,21	0.00 Aug 2-17, Sep 3-30	0.00
ANNUAL SEVEN-DAY MINIMUM	0.01 Aug 16	0.00 Aug 2	0.00
MAXIMUM PEAK FLOW	---	5800	11800
MAXIMUM PEAK STAGE	---	16.99	22.25
INSTANTANEOUS LOW FLOW	---	0.00 Aug 1-19, Sep 3-30	0.00
ANNUAL RUNOFF (INCHES)	12.86	11.50	9.67
10 PERCENT EXCEEDS	79	48	85
50 PERCENT EXCEEDS	5.4	4.8	3.8
90 PERCENT EXCEEDS	0.24	0.00	0.03

e Estimated

## SALT RIVER BASIN

69

05507700 MARK TWAIN LAKE NEAR CENTER, MO

LOCATION.--Lat 39°31'29", long 91°38'37", sec.26, T.55 N., R.7 W., Ralls County, Hydrologic Unit 07110007, inside dam structure at mile 63.0 on Salt River.

DRAINAGE AREA.--2,318 mi<sup>2</sup>.

PERIOD OF RECORD.--1984 to current year. 1984 to Sept. 30, 1991, available in files at the U.S. Army Corps of Engineers.

GAGE.--Water stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,360,000 ac-ft, May 28-30, 1995, elevation, 636.22 ft, May 29; minimum, 386,000 ac-ft, Oct. 10, 1984, elevation, 596.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,290,000 ac-ft, May 16, elevation, 633.97 ft; minimum, 461,000 ac-ft, Sept. 28-30, elevation, 601.26 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	602.45	602.14	602.08	601.84	606.05	606.54	607.02	615.20	626.88	616.13	607.63	603.28
2	602.45	601.95	602.08	601.83	606.81	606.52	607.04	615.31	626.17	615.32	607.45	603.28
3	602.37	601.95	602.10	601.83	606.93	606.26	607.05	615.03	625.44	614.52	607.14	603.02
4	602.34	601.96	602.11	601.85	606.86	605.87	607.02	614.67	624.69	613.68	606.78	602.77
5	602.49	601.95	602.11	601.80	606.79	605.69	607.02	614.29	623.96	613.00	606.77	602.46
6	602.77	601.94	602.12	601.81	606.63	605.76	607.02	615.03	623.23	612.67	606.40	602.14
7	603.02	601.95	602.10	601.82	606.49	605.88	607.06	618.14	622.92	612.22	606.29	601.94
8	603.07	601.97	602.11	601.82	606.26	606.05	607.14	620.58	622.79	611.87	606.03	601.93
9	603.09	601.84	602.10	601.81	606.22	606.38	607.38	623.61	622.62	611.50	605.65	601.92
10	603.15	601.85	602.11	601.82	606.37	606.51	607.58	626.25	622.47	611.27	605.41	601.80
11	603.17	601.82	602.10	601.82	606.36	606.86	607.77	627.68	622.39	611.10	605.41	601.52
12	603.27	601.82	602.12	601.78	606.48	607.05	607.90	629.54	622.66	610.97	605.38	601.51
13	603.29	601.84	602.16	601.75	606.52	606.94	607.97	631.34	623.16	610.94	605.09	601.50
14	603.48	601.83	602.18	601.82	606.59	606.93	608.02	632.69	623.57	610.98	604.52	601.48
15	603.54	601.83	602.17	601.78	606.64	606.90	608.07	633.68	623.51	611.01	604.45	601.58
16	603.63	601.83	602.21	601.77	606.64	606.90	607.85	633.97	623.44	610.64	604.14	601.56
17	603.67	601.83	602.22	601.77	606.62	606.95	607.83	633.60	623.40	610.51	604.18	601.56
18	603.68	601.84	602.05	601.75	606.58	606.99	607.62	633.42	623.16	610.37	604.18	601.57
19	603.73	601.88	601.97	601.75	606.50	606.94	607.42	633.02	622.81	610.07	604.25	601.50
20	603.75	601.85	601.96	601.75	606.61	606.80	607.49	632.35	622.28	609.79	604.22	601.50
21	603.77	601.87	601.94	601.77	606.76	606.78	608.08	631.63	621.77	609.60	604.03	601.48
22	603.75	601.83	601.88	601.75	606.99	606.82	609.66	631.31	621.49	609.42	603.85	601.48
23	603.77	601.81	601.95	601.77	607.07	606.86	609.98	631.01	621.20	609.23	603.80	601.46
24	603.38	601.97	601.94	601.78	607.14	606.84	609.72	630.34	620.76	608.98	603.59	601.38
25	603.45	602.05	601.93	601.75	607.22	606.86	609.19	629.82	620.21	608.71	603.64	601.36
26	603.17	602.05	601.94	601.75	607.26	606.91	609.27	629.30	619.56	608.34	603.66	601.35
27	603.03	602.12	601.91	601.74	607.01	606.89	609.25	628.95	618.94	608.16	603.60	601.35
28	602.98	602.07	601.94	601.74	606.69	606.92	612.59	628.50	618.22	608.16	603.30	601.26
29	602.81	602.08	601.86	601.75	---	606.90	614.30	627.86	617.47	608.17	603.30	601.26
30	602.35	602.13	601.85	601.82	---	606.98	615.07	627.68	616.81	608.18	603.29	601.26
31	602.32	---	601.85	603.74	---	607.01	---	627.56	---	607.90	603.29	---
MEAN	603.14	601.93	602.04	601.85	606.68	606.66	608.55	626.56	622.27	610.76	604.86	601.78
MAX	603.77	602.14	602.22	603.74	607.26	607.05	615.07	633.97	626.88	616.13	607.63	603.28
MIN	602.32	601.81	601.85	601.74	606.05	605.69	607.02	614.29	616.81	607.90	603.29	601.26

## SALT RIVER BASIN

05507700 MARK TWAIN LAKE NEAR CENTER, MO--Continued

RESERVOIR STORAGE, (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	481000	476000	475000	471000	546000	555000	564000	742000	1050000	764000	576000	496000
2	481000	473000	475000	471000	560000	554000	565000	744000	1030000	745000	572000	496000
3	480000	473000	475000	471000	563000	550000	565000	738000	1010000	726000	567000	491000
4	480000	473000	476000	471000	561000	542000	564000	729000	991000	706000	560000	487000
5	482000	473000	476000	470000	560000	539000	564000	720000	970000	690000	559000	482000
6	487000	473000	476000	470000	557000	540000	564000	738000	949000	682000	552000	476000
7	491000	473000	475000	471000	554000	543000	565000	811000	940000	672000	550000	473000
8	492000	473000	476000	471000	550000	546000	567000	872000	936000	663000	546000	473000
9	492000	471000	475000	470000	549000	552000	571000	960000	931000	655000	538000	472000
10	493000	471000	476000	471000	551000	554000	575000	1040000	927000	651000	534000	470000
11	494000	471000	475000	471000	551000	561000	578000	1080000	924000	647000	534000	465000
12	495000	471000	476000	470000	554000	565000	581000	1130000	932000	644000	533000	465000
13	496000	471000	476000	469000	554000	563000	582000	1190000	947000	643000	528000	465000
14	499000	471000	477000	471000	556000	563000	583000	1240000	959000	644000	518000	465000
15	500000	471000	477000	470000	557000	562000	584000	1280000	957000	645000	516000	466000
16	502000	471000	477000	470000	557000	562000	580000	1290000	955000	637000	510000	466000
17	502000	471000	477000	470000	556000	563000	580000	1280000	954000	634000	511000	466000
18	503000	471000	475000	469000	556000	564000	575000	1270000	947000	631000	511000	466000
19	504000	472000	473000	469000	554000	563000	572000	1260000	936000	625000	513000	465000
20	504000	471000	473000	469000	556000	560000	573000	1230000	921000	619000	512000	465000
21	504000	471000	473000	470000	559000	560000	585000	1200000	906000	615000	508000	465000
22	504000	471000	472000	469000	564000	560000	617000	1190000	898000	611000	506000	465000
23	504000	470000	473000	470000	565000	561000	624000	1180000	890000	608000	505000	464000
24	498000	473000	473000	470000	567000	561000	618000	1160000	877000	603000	501000	463000
25	498000	475000	473000	469000	568000	561000	607000	1140000	861000	597000	502000	463000
26	494000	475000	473000	469000	569000	562000	609000	1120000	845000	590000	502000	463000
27	491000	476000	472000	469000	564000	562000	608000	1110000	830000	586000	501000	463000
28	491000	475000	473000	469000	558000	562000	680000	1100000	813000	586000	496000	461000
29	488000	475000	471000	469000	---	562000	721000	1080000	795000	586000	496000	461000
30	480000	476000	471000	471000	---	564000	739000	1080000	780000	587000	496000	461000
31	479000	---	471000	504000	---	564000	---	1070000	---	581000	496000	---
MEAN	493000	473000	474000	471000	558000	557000	595000	1060000	922000	641000	524000	470000
MAX	504000	476000	477000	504000	569000	565000	739000	1290000	1050000	764000	576000	496000
MIN	479000	470000	471000	469000	546000	539000	564000	720000	780000	581000	496000	461000

05507800 SALT RIVER NEAR CENTER, MO

LOCATION.--Lat 39°34'26", long 91°34'15", near SE corner sec.4, T.55 N., R.6 W., Ralls County, Hydrologic Unit 07110007, on left bank at left downstream end of bridge on Highway A, 0.5 mi downstream from Clarence Cannon Dam, 5.0 mi northwest of Center, and at mile 53.1.

DRAINAGE AREA.--2,350 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1979 to current year. Prior to October 1979, gage height records only by the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 500.00 ft above National Geodetic Vertical Datum of 1929. Prior to October 1979 nonrecording gage at same site and datum.

REMARKS.--Records fair except for those below 30 ft<sup>3</sup>/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station. Flow regulated by Clarence Cannon Dam, 0.5 mi upstream.

EXTREME OUTSIDE PERIOD OF RECORD.--Maximum gage height, 33.00 ft, Apr. 22, 1973, by U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	50	2120	62	52	1130	1060	56	2350	9620	7240	1640	59
2	56	577	61	51	3700	1700	54	3570	9740	8450	2160	1370
3	64	54	59	50	1990	2890	53	3810	9890	8540	2850	1870
4	67	52	56	50	1880	3190	59	4600	9690	8680	1370	2200
5	72	50	177	56	2100	768	54	4640	9190	6350	2050	2540
6	65	47	56	55	1690	60	54	6430	7970	3780	1950	1830
7	64	45	53	53	2370	60	53	5480	914	4080	1810	413
8	62	49	52	50	1200	255	367	4850	1840	3440	2410	56
9	61	62	50	49	37	415	892	5360	2280	3240	2820	610
10	61	62	48	48	37	1250	59	6480	1890	2270	218	1780
11	63	62	47	259	34	60	50	8470	1300	1680	59	337
12	64	61	47	95	34	969	51	7740	3400	1110	1720	57
13	64	60	46	47	34	1330	49	7730	1830	438	1910	56
14	63	59	47	46	32	1270	47	9560	1430	61	4060	56
15	70	58	51	46	193	417	1880	11300	2840	2100	1810	137
16	963	59	51	47	110	72	729	10300	2160	2750	650	296
17	497	59	290	48	64	70	1870	11100	2040	2140	68	35
18	1750	58	2070	48	1180	406	2080	12000	4680	2160	67	19
19	682	58	624	52	688	1130	112	11900	5030	2870	68	58
20	59	56	46	50	64	1330	54	11800	6580	2630	1510	58
21	57	53	448	48	63	62	97	9960	6090	1840	1370	57
22	354	51	83	46	273	58	3540	3910	2210	1910	2200	58
23	1340	50	53	45	77	56	5920	7450	4720	2770	1900	183
24	2820	54	51	49	59	58	5740	10400	5970	2500	873	60
25	202	51	50	60	62	59	3510	10300	7280	2970	64	58
26	2120	50	48	57	1170	56	1570	11300	7040	2800	547	57
27	448	48	47	55	2330	61	3280	10500	7180	333	1820	335
28	328	49	105	59	2960	60	2270	10400	8300	59	687	70
29	2660	49	181	55	---	62	1410	9210	8360	59	62	57
30	2600	49	56	66	---	61	2380	2230	7420	1630	61	1100
31	639	---	54	1580	---	61	---	6160	---	3090	60	---
MEAN	596	140	167	109	913	624	1278	7784	5296	3031	1318	529
MAX	2820	2120	2070	1580	3700	3190	5920	12000	9890	8680	4060	2540
MIN	50	45	46	45	32	56	47	2230	914	59	59	19
IN.	0.29	0.07	0.08	0.05	0.40	0.31	0.61	3.82	2.52	1.49	0.65	0.25

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	MEAN	1039	1340	1760	994	1780	2751	2302	2742	2713	2900	1475	1002
MAX	9085	6038	10360	3703	8098	10530	10310	7784	10560	10810	7895	7902	
(WY)	1994	1987	1983	1986	1982	1985	1983	2002	1995	1981	1993	1993	
MIN	4.62	14.8	31.4	30.5	81.6	87.0	99.4	67.5	126	75.2	13.9	25.3	
(WY)	1980	1981	1980	1980	1989	1989	2000	1989	1988	1983	1980	1983	

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1980 - 2002

	1949	1823	1901	1993
ANNUAL MEAN			3462	
HIGHEST ANNUAL MEAN			283	1989
LOWEST ANNUAL MEAN			65600	Jul 29 1981
HIGHEST DAILY MEAN	9510	Feb 19	0.44	Oct 14 1979
LOWEST DAILY MEAN	36	Sep 12	0.65	Oct 11 1979
ANNUAL SEVEN-DAY MINIMUM	48	Dec 9	72800	Jul 29 1981
MAXIMUM PEAK FLOW	---		32.62	Jul 29 1981
MAXIMUM PEAK STAGE	---		0.44	Oct 14 1979
INSTANTANEOUS LOW FLOW	---		10.99	
ANNUAL RUNOFF (INCHES)	11.26		5730	
10 PERCENT EXCEEDS	5940		440	
50 PERCENT EXCEEDS	990		49	
90 PERCENT EXCEEDS	53			

05508000 SALT RIVER NEAR NEW LONDON, MO

LOCATION.--Lat 39°36'44", long 91°24'30", in NE ¼ NW ¼ sec.36, T.56 N., R.5 W., Ralls County, Hydrologic Unit 07110007, on left bank near downstream end of bridge on north bound side of dual U.S. Highway 61, 9.9 mi downstream from Clarence Cannon Dam, 2.0 mi north of New London, 8.0 mi upstream from Spencer Creek, and at mile 35.5.

DRAINAGE AREA.--2,480 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--February 1922 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 477.03 ft above National Geodetic Vertical Datum of 1929. Prior to Apr. 7, 1931, nonrecording gage 400 ft upstream at datum 0.03 ft higher; Apr. 7, 1931 to Jan. 17, 1935, nonrecording gage at site 180 ft upstream at datum 0.04 ft lower; Jan. 17, 1935 to April 1985, water-stage recorder 400 ft upstream same datum.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station. Flow mostly regulated by Clarence Cannon Dam, 9.9 mi upstream, since September 1979. Five percent of the drainage area, 130 mi<sup>2</sup>, is natural drainage not regulated.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 107,000 ft<sup>3</sup>/s, Apr. 22, 1973; gage height, 31.8 ft.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 14, 1858, reached a stage of 27.6 ft, present site and datum, based on comparison of June 1928 flood crest at stone marker, 1.0 mi downstream of gage.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	1740	63	64	1320	1490	102	2530	10600	7740	2110	87
2	57	1520	75	61	4000	1180	99	3210	10800	9080	1860	274
3	64	112	73	58	2540	2810	90	4320	10900	9170	2820	1670
4	74	71	71	58	2030	3630	88	4720	11000	9420	2830	2120
5	218	65	68	61	2000	1650	96	4760	10200	7400	682	2630
6	160	60	190	69	2000	306	97	10700	9540	3750	2770	2430
7	94	56	70	63	1990	166	102	9880	1810	4220	1260	1370
8	83	51	62	64	1870	142	261	5480	1840	3760	2080	148
9	78	53	57	62	356	427	1140	8070	2350	3570	3390	89
10	87	71	55	61	101	1500	767	6370	1980	2380	1610	965
11	89	70	52	57	83	347	166	11500	1610	2120	118	1770
12	225	70	56	302	77	143	138	9270	3270	1410	391	114
13	152	70	61	83	69	2160	122	8770	2800	1400	2140	85
14	239	68	61	64	66	852	113	10100	1640	134	4770	80
15	124	66	61	59	141	1140	776	12000	2850	798	1090	88
16	819	66	65	59	168	145	1530	12200	2300	3000	2090	319
17	328	65	183	63	151	121	1020	12300	1850	2110	186	165
18	1660	65	1320	63	528	115	2400	13800	4300	2120	116	59
19	973	68	1280	64	1230	740	1360	13500	5230	2910	120	23
20	323	60	295	67	424	2000	146	13400	6990	2790	270	71
21	94	59	75	65	185	296	1420	12600	6570	2010	1650	75
22	244	56	511	61	141	115	2230	4280	2900	1770	1910	73
23	416	53	119	60	347	109	6040	6790	4380	2400	2440	71
24	3300	235	86	55	130	109	6000	11900	5830	2580	2470	201
25	657	134	76	59	117	110	5550	11000	7730	2920	154	81
26	1380	87	71	75	464	105	798	12600	7530	2960	105	75
27	1320	73	68	72	2200	101	6030	12200	7530	2030	861	72
28	280	62	65	70	2970	107	3880	11400	8940	126	2190	353
29	1530	62	231	73	---	108	1380	11800	9000	101	167	88
30	3450	62	104	276	---	106	2660	3150	7930	413	98	106
31	435	---	70	3650	---	104	---	4490	---	2840	90	---
MEAN	614	178	184	194	989	724	1553	9003	5740	3207	1446	525
MAX	3450	1740	1320	3650	4000	3630	6040	13800	11000	9420	4770	2630
MIN	57	51	52	55	66	101	88	2530	1610	101	90	23
IN.	0.29	0.08	0.09	0.09	0.42	0.34	0.70	4.19	2.58	1.49	0.67	0.24

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002<sup>a</sup>, BY WATER YEAR (WY)

	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	1066	1458	1879	1081	1927	2940	2465	2936	2807	3010	1554	1053											
MAX	9165	6406	11100	4001	8787	10810	10660	9003	10950	11900	7961	8300											
(WY)	1994	1986	1983	1985	1982	1985	1983	2002	1995	1981	1993	1993											
MIN	16.9	18.4	48.6	37.1	84.9	90.2	114	93.4	128	88.4	42.8	28.5											
(WY)	1980	1981	1980	1981	1989	1989	2000	1989	1988	1983	1983	1983											

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002 <sup>a</sup>	
ANNUAL MEAN	2028		2039		2016	
HIGHEST ANNUAL MEAN					3577	
LOWEST ANNUAL MEAN					307	
HIGHEST DAILY MEAN	9900	Feb 19	13800	May 18	62100	Jul 30 1981
LOWEST DAILY MEAN	49	Sep 5	23	Sep 19	9.5	Nov 21 1980
ANNUAL SEVEN-DAY MINIMUM	58	Dec 9	58	Dec 9	9.6	Nov 20 1980
MAXIMUM PEAK FLOW	---		15800	May 6	74200	Jul 29 1981
MAXIMUM PEAK STAGE	---		15.14	May 6	31.09	Jul 29 1981
INSTANTANEOUS LOW FLOW	---		17	Sep 19	9.5	Nov 21 1980
ANNUAL RUNOFF (INCHES)	11.10		11.16		11.05	
10 PERCENT EXCEEDS	5830		7450		5910	
50 PERCENT EXCEEDS	1130		323		522	
90 PERCENT EXCEEDS	66		63		58	

<sup>a</sup> Post-regulation period.

05508805 SPENCER CREEK BELOW PLUM CREEK NEAR FRANKFORD, MO

LOCATION.--Lat 39°31'13", long 91°20'32", in NW ¼ NW ¼ NW ¼ sec.27, T.55 N., R.4 W., Ralls County, Hydrologic Unit 07110007, on left bank 25 ft downstream from bridge on dual U.S. Highway 61, 0.75 mi downstream from Plum Creek, 2.5 mi northwest of Frankford, and at mile 4.5.

DRAINAGE AREA.--206 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1, 1979 to current year. Mar. 27, 1930 to September 1978, fragmentary record.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 485.00 ft above National Geodetic Vertical Datum of 1929. Mar. 24, 1930, to Sept. 30, 1936, nonrecording gage at site 0.75 mi upstream at datum 3.63 ft higher; Oct. 7, 1961, to July 15, 1974, fragmentary record, at present site, datum unknown; July 26, 1974, to Apr. 15, 1975, from nonrecording gage present site and datum.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	18	22	14	1060	23	24	629	79	16	2.4	2.7
2	7.7	18	23	13	293	38	22	439	61	14	2.1	2.5
3	7.6	18	23	12	179	54	18	229	51	14	1.9	1.9
4	7.5	17	20	11	127	50	16	167	45	14	1.9	1.4
5	46	17	18	11	96	57	15	139	41	13	2.1	1.2
6	77	16	16	11	79	191	14	8010	39	11	1.6	0.93
7	37	16	14	11	68	176	14	4920	35	9.9	1.3	0.55
8	23	16	14	11	59	123	326	1190	32	9.4	1.3	0.45
9	18	15	13	11	54	144	386	3440	30	10	1.5	0.52
10	16	15	12	12	49	132	167	594	28	55	1.3	0.51
11	19	14	12	12	42	90	108	2940	186	98	1.3	0.42
12	182	14	13	11	38	72	81	1790	567	30	1.2	0.44
13	131	15	31	11	32	62	66	2400	2230	19	1.1	0.42
14	187	14	57	11	29	54	58	429	396	13	1.4	0.41
15	104	14	50	10	26	50	52	254	149	11	1.2	0.76
16	129	14	42	9.8	23	43	45	303	90	9.3	0.91	0.98
17	89	13	48	9.8	20	38	38	989	66	8.4	1.0	0.94
18	57	13	73	10	19	34	33	871	55	8.3	1.7	0.98
19	36	14	51	12	22	34	62	276	47	9.0	9.3	1.6
20	31	13	35	12	114	41	437	183	41	7.9	18	1.8
21	26	13	28	12	124	39	2130	144	36	7.1	7.4	2.0
22	22	13	48	11	76	32	567	121	32	16	4.0	2.0
23	23	13	91	12	58	30	211	104	29	20	45	1.6
24	23	273	60	14	47	28	148	151	26	7.6	62	1.6
25	26	152	37	14	38	31	126	113	24	5.3	49	1.8
26	23	69	31	13	32	32	92	94	105	4.7	24	1.7
27	20	44	25	13	25	33	4790	87	36	4.3	14	1.8
28	19	31	21	13	24	34	3140	117	29	3.7	8.7	1.6
29	19	26	19	13	---	32	453	103	23	3.5	6.1	1.5
30	19	23	16	169	---	30	285	489	19	3.0	4.5	1.4
31	19	---	15	5170	---	26	---	147	---	2.7	3.5	---
MEAN	46.9	32.0	31.6	183	102	59.8	464	1028	154	14.8	9.12	1.28
MAX	187	273	91	5170	1060	191	4790	8010	2230	98	62	2.7
MIN	7.5	13	12	9.8	19	23	14	87	19	2.7	0.91	0.41
IN.	0.26	0.17	0.18	1.03	0.52	0.33	2.51	5.75	0.84	0.08	0.05	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1980 - 2002, BY WATER YEAR (WY)

	MEAN	44.6	176	162	118	219	202	257	296	133	164	62.4	84.9
MAX	376	1310	985	453	766	738	919	1028	451	1788	290	1402	
(WY)	1987	1986	1983	1999	1985	1984	1994	2002	1982	1981	1995	1993	
MIN	0.22	0.48	1.67	2.58	3.40	9.23	14.3	15.1	2.23	0.84	0.96	0.32	
(WY)	1989	1990	1990	1980	1980	1981	2000	1988	1988	1988	1994	1988	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1980 - 2002	
ANNUAL MEAN	133		178		160	
HIGHEST ANNUAL MEAN					355	
LOWEST ANNUAL MEAN					33.1	
HIGHEST DAILY MEAN	4900	Jan 29	8010	May 6	15600	Jul 28 1981
LOWEST DAILY MEAN	0.70	Aug 22	0.41	Sep 14	0.08	Aug 14 1989
ANNUAL SEVEN-DAY MINIMUM	1.0	Aug 3	0.45	Sep 8	0.10	Sep 7 1990
MAXIMUM PEAK FLOW	---		13100	May 6	20300	Sep 22 1993
MAXIMUM PEAK STAGE	---		15.91	May 6	18.54	Sep 22 1993
INSTANTANEOUS LOW FLOW	---		0.32	Sep 14	0.00	Many Days 1989
ANNUAL RUNOFF (INCHES)	8.77		11.73		10.52	
10 PERCENT EXCEEDS	130		189		227	
50 PERCENT EXCEEDS	21		23		23	
90 PERCENT EXCEEDS	2.7		1.8		1.2	

## CUIVRE RIVER BASIN

05514500 CUIVRE RIVER NEAR TROY, MO

LOCATION.--Lat 39°00'59", long 90°59'00", in SE ¼ sec.14, T.49 N., R.1 W., Lincoln County, Hydrologic Unit 07110008, on downstream side of right end of downstream bridge on dual U.S. Highway 61, 1.2 mi downstream from confluence of North Fork and West Fork Cuivre Rivers, and 2.0 mi north of Troy.

DRAINAGE AREA.--903 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--February 1922 to July 1972, May 1979 to current year.

REVISED RECORDS.--WSP 855: 1933(m), 1935(m), 1937(m). WSP 895: 1939. WSP 1005: 1942(m). WSP 1308: 1922-25(m).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 450.27 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1930, nonrecording gage at site 3 mi downstream at datum 4.31 ft lower; Oct. 1, 1930, to July 1939, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--The highest flood since 1888 was the flood of December 1895 which was 5 to 6 ft lower at Frenchmens Bluff, 3.0 mi downstream, than the October 1941 flood, which reached a stage of 33.40 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	44	558	82	12000	110	378	1220	634	59	17	17
2	15	53	331	73	3000	319	328	1480	434	54	14	16
3	14	49	254	68	1030	800	281	760	340	50	14	13
4	13	52	200	64	650	510	245	528	281	50	12	11
5	16	68	160	65	456	385	220	420	261	117	12	9.6
6	16	54	136	66	367	1090	196	12200	260	75	11	9.0
7	15	47	117	65	324	949	188	36600	216	57	9.9	8.6
8	30	42	102	64	297	632	480	21000	190	45	9.0	8.6
9	30	37	88	66	278	1310	1570	15500	171	40	8.4	8.3
10	2120	36	79	67	259	1410	782	6740	154	64	8.3	7.8
11	1830	34	72	66	239	615	472	2660	296	327	8.7	6.2
12	922	32	106	66	224	447	356	6390	12500	588	8.9	5.6
13	691	31	1590	64	201	376	308	22400	7300	623	18	5.4
14	827	31	871	62	185	338	286	6310	2630	550	20	5.3
15	519	31	747	59	172	305	264	2140	985	142	15	6.1
16	1730	31	757	58	161	290	237	1500	435	74	16	5.5
17	792	31	6350	55	147	277	211	4800	354	53	43	6.6
18	365	32	2220	52	142	265	186	11600	294	42	25	14
19	245	34	881	54	147	254	189	3130	181	46	32	13
20	163	32	504	53	159	287	4220	1590	e170	60	30	67
21	118	31	349	52	211	299	3330	1160	157	43	30	48
22	93	30	293	51	234	263	3200	1000	131	33	27	22
23	78	31	262	57	194	229	1100	885	115	169	445	14
24	83	2010	250	59	173	213	613	851	103	312	405	10
25	88	2220	240	66	150	1230	451	939	94	136	156	8.8
26	96	602	189	75	131	1270	343	747	86	72	91	8.2
27	85	334	163	73	117	1580	4690	619	80	47	66	7.8
28	67	247	140	67	109	951	16600	905	72	34	42	7.1
29	60	201	119	64	---	907	4240	1860	68	25	31	7.2
30	54	357	101	123	---	722	1380	1670	64	21	25	6.4
31	48	---	95	14100	---	504	---	919	---	18	20	---
MEAN	362	2289	591	518	777	617	1578	5501	968	130	53.9	12.8
MAX	2120	2220	6350	14100	12000	1580	16600	36600	12500	623	445	67
MIN	13	30	72	51	109	110	186	420	64	18	8.3	5.3
IN.	0.46	0.28	0.75	0.66	0.90	0.79	1.95	7.02	1.20	0.17	0.07	0.02

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	398	509	503	540	869	996	1216	1085	711	554	291	445
MAX	6704	4503	5924	2465	4250	3596	6126	6311	4735	4366	1994	9098
(WY)	1942	1986	1983	1949	1962	1922	1994	1929	1970	1981	1923	1993
MIN	0.10	1.30	1.11	1.63	1.80	2.51	25.8	17.1	11.0	0.44	0.23	0.24
(WY)	1965	1954	1964	1954	1954	1954	1954	1934	1936	1934	1936	1964

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	720	949	675
HIGHEST ANNUAL MEAN			2186
LOWEST ANNUAL MEAN			27.3
HIGHEST DAILY MEAN	23000	36600	76400
LOWEST DAILY MEAN	13 Aug 23, Oct 4	5.3 Sep 14	0.00 Several Years
ANNUAL SEVEN-DAY MINIMUM	15 Aug 17	5.8 Sep 11	0.00 At Times
MAXIMUM PEAK FLOW	---	40600 May 7	120000 Oct 5 1941
MAXIMUM PEAK STAGE	---	27.47 May 7	33.40 Oct 5 1941
INSTANTANEOUS LOW FLOW	---	4.4 Sep 14	0.00 Several Years
ANNUAL RUNOFF (INCHES)	10.83	14.27	10.16
10 PERCENT EXCEEDS	1540	1580	1240
50 PERCENT EXCEEDS	121	147	92
90 PERCENT EXCEEDS	22	14	6.0

e Estimated



05514500 CUIVRE RIVER NEAR TROY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1982 to current year.

REMARKS.--National Stream-Quality Accounting Network station October 1986 through September 1994. Ambient Water-Quality Monitoring Network station October 1994 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
NOV 14...	1300	ENVIRONMENTAL	31	13.2	123	7.6	390	11.2	180	56.6	9.44	3.43
JAN 15...	1150	ENVIRONMENTAL	62	14.1	104	7.1	273	2.5	--	--	--	--
MAR 12...	1200	ENVIRONMENTAL	451	8.8	77	7.7	344	8.9	--	--	--	--
MAY 15...	0900	ENVIRONMENTAL	2200	7.9	80	7.5	257	15.3	110	36.4	5.20	4.03
JUL 10...	0750	ENVIRONMENTAL	36	5.0	67	7.4	397	29.1	--	--	--	--
SEP 04...	1140	ENVIRONMENTAL	12	7.4	92	7.5	337	26.3	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 14...	11.9	150	152	186	0	15.9	.2	19.7	20	230	<.04	.47	<.05
JAN 15...	--	176	175	213	0	--	--	--	<10	--	E.02	.28	1.47
MAR 12...	--	102	103	125	0	--	--	--	38	--	<.04	.92	1.21
MAY 15...	5.42	102	102	124	0	6.29	.2	13.8	162	188	.05	.89	1.48
JUL 10...	--	164	168	205	0	--	--	--	42	--	<.04	.68	.06
SEP 04...	--	134	134	164	0	--	--	--	19	--	<.04	.65	<.05

DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 14...	<.008	<.06	<.02	E.05	K16	K15	36	19	84	.6	<.04	<.1	<6
JAN 15...	E.004	<.06	<.02	E.03	K6	21	26	--	--	--	--	--	--
MAR 12...	.020	.10	.05	.19	K24	K253	192	--	--	--	--	--	--
MAY 15...	.034	.18	.13	.30	680	K1350	980	391	2360	1.2	E.02	<.1	<6
JUL 10...	<.008	<.06	<.02	.06	K100	153	240	--	--	--	--	--	--
SEP 04...	<.008	<.06	<.02	.09	K50	K50	112	--	--	--	--	--	--

## CUIVRE RIVER BASIN

05514500 CUIVRE RIVER NEAR TROY, MO--Continued  
 (Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
14...	146	E.07	<1	217	<.01	E.2	--	4
JAN								
15...	--	--	--	--	--	--	--	--
MAR								
12...	--	--	--	--	--	--	--	--
MAY								
15...	282	.75	5	76.5	.02	.6	--	12
JUL								
10...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## DARDENNE CREEK BASIN

77

05514840 DARDENNE CREEK AT O'FALLON, MO

LOCATION.--Lat 38°44'26", long 90°41'42", in NE ¼ NE ¼ SE ¼ sec.16, R.46 N., R.3 E., St. Charles County, Hydrologic Unit 07110009, attached to downstream side of State Highway K bridge, 4.2 mi south of Interstate 70.

DRAINAGE AREA.--61.0 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 18, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.3	6.1	90	12	462	21	54	59	22	11	5.0	2.3
2	2.3	7.6	48	12	185	419	54	55	19	16	4.2	1.7
3	1.1	5.8	35	11	120	187	52	46	19	26	4.1	1.7
4	1.3	6.2	30	11	83	88	39	34	17	14	4.1	1.5
5	34	6.0	22	11	63	72	30	29	60	12	4.4	1.4
6	5.7	4.9	17	12	52	89	27	44	33	10	7.5	1.4
7	2.1	3.9	14	11	44	58	26	737	20	8.1	5.6	1.5
8	1.7	3.7	13	11	37	48	204	756	17	8.1	4.0	2.0
9	1.6	e4.5	12	11	32	180	170	1040	16	15	3.8	2.1
10	175	e5.0	9.6	11	32	90	84	226	29	90	3.7	1.9
11	104	e6.1	8.2	11	27	62	58	129	83	40	4.0	1.6
12	62	e5.9	34	12	26	54	48	1270	2330	45	4.7	1.5
13	37	5.7	130	11	22	46	43	1730	291	14	9.4	1.5
14	21	4.6	98	11	20	37	38	280	145	10	23	4.7
15	58	3.6	65	9.2	21	63	35	157	88	9.6	7.7	5.5
16	110	3.7	567	8.6	19	72	33	270	58	8.9	5.5	2.4
17	30	3.4	869	8.3	17	52	33	537	51	14	5.0	62
18	13	3.4	228	7.3	16	50	30	329	35	30	49	16
19	7.2	4.2	118	8.9	57	91	223	144	27	22	9.0	118
20	5.6	8.4	80	8.7	128	145	940	91	23	12	5.0	54
21	4.5	3.6	51	9.0	58	83	611	68	21	9.2	3.9	15
22	6.1	3.1	60	7.9	39	56	224	56	19	13	2.8	9.0
23	7.2	2.9	52	9.2	31	45	125	48	17	27	14	7.1
24	172	491	36	14	27	39	90	47	16	9.7	5.4	5.9
25	94	77	27	11	26	299	92	45	15	7.1	3.6	5.1
26	28	39	22	10	28	311	60	37	14	6.1	3.0	4.8
27	15	34	22	8.9	22	340	333	32	13	5.8	2.6	4.8
28	11	70	22	8.3	20	223	218	30	12	5.4	2.3	5.8
29	9.3	223	19	20	---	123	97	30	11	4.7	1.9	4.1
30	7.6	307	15	423	---	92	69	28	11	4.6	1.7	4.0
31	6.7	---	13	1570	---	68	---	24	---	4.5	2.2	---
MEAN	33.4	45.1	91.2	74.2	61.2	116	138	271	118	16.5	6.84	11.7
MAX	175	491	869	1570	462	419	940	1730	2330	90	49	118
MIN	1.1	2.9	8.2	7.3	16	21	26	24	11	4.5	1.7	1.4

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	20.2	27.4	40.7	33.3	74.3	57.2	74.2	135	134	16.2	10.4	6.30
MAX	33.4	45.1	91.2	74.2	101	116	138	271	220	23.1	17.8	11.7
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2000	2000	2000	2002
MIN	6.93	9.72	4.14	3.84	61.2	22.9	20.1	10.5	65.3	8.97	6.72	3.37
(WY)	2001	2001	2001	2000	2002	2000	2000	2001	2001	2001	2001	2001

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 2000 - 2002

ANNUAL MEAN	39.8	82.2	54.7
HIGHEST ANNUAL MEAN			82.2
LOWEST ANNUAL MEAN			27.2
HIGHEST DAILY MEAN	1260	2330	4140
LOWEST DAILY MEAN	1.1	1.1	0.86
ANNUAL SEVEN-DAY MINIMUM	1.6	1.6	1.3
MAXIMUM PEAK FLOW	---	4100	5770
MAXIMUM PEAK STAGE	---	16.28	19.14
INSTANTANEOUS LOW FLOW	---	0.85	0.53
10 PERCENT EXCEEDS	71	177	92
50 PERCENT EXCEEDS	9.7	21	11
90 PERCENT EXCEEDS	2.3	3.7	2.6

e Estimated

## DARDENNE CREEK BASIN

05514860 DARDENNE CREEK AT OLD TOWN ST. PETERS, MO

LOCATION.--Lat 38°48'12", long 90°38'06", in SE 1/4 SW 1/4 SW 1/4 sec.24, R.47 N., R.3 E., St. Charles County, Hydrologic Unit 07110009, on left bank 0.6 mi upstream from State Highway C.

DRAINAGE AREA.--102 mi<sup>2</sup>.

PERIOD OF RECORD.--Nov. 18, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.52	5.8	101	17	1390	30	66	69	18	6.0	1.4	1.1
2	0.57	9.5	49	16	211	710	60	65	16	9.4	1.2	1.4
3	0.45	8.7	34	15	131	227	58	57	14	21	0.87	0.92
4	0.45	6.1	29	15	97	94	49	43	13	15	0.84	1.6
5	86	5.3	24	16	77	84	39	38	317	6.5	0.74	0.98
6	21	5.4	19	16	65	94	36	85	46	6.3	33	1.6
7	4.8	5.7	16	15	55	69	34	1690	19	4.9	3.6	1.1
8	2.4	6.0	14	15	46	58	284	1600	15	4.6	1.4	1.4
9	1.9	6.8	14	15	41	244	199	2050	11	5.0	0.84	1.0
10	501	7.3	11	15	42	104	91	303	170	84	0.64	1.3
11	262	9.0	11	15	37	71	66	146	260	56	0.53	0.77
12	239	9.0	73	16	34	63	55	1970	3830	53	0.51	0.51
13	47	10	170	16	31	55	51	3810	1660	13	12	0.63
14	37	10	142	15	29	46	44	630	219	5.6	174	11
15	74	11	73	14	28	85	41	300	105	3.7	48	61
16	242	8.0	1080	13	27	92	37	519	60	3.9	24	3.3
17	35	7.1	2180	14	25	62	40	1040	43	4.3	8.0	97
18	16	7.3	316	12	23	52	34	950	34	36	207	89
19	11	11	125	15	89	108	245	241	23	19	54	967
20	8.1	13	80	17	133	154	2480	130	17	8.6	8.4	568
21	6.6	12	53	15	69	89	1180	77	15	4.7	4.0	130
22	6.1	8.9	82	15	47	63	280	57	13	3.5	2.8	43
23	7.8	8.2	57	17	39	52	135	50	11	83	78	15
24	240	1170	39	36	35	46	109	52	9.2	7.4	30	8.9
25	165	103	31	19	33	466	101	45	8.1	4.7	4.5	4.4
26	29	47	27	16	39	434	72	36	8.2	2.9	2.9	4.1
27	15	39	25	14	32	549	709	30	7.0	1.9	2.3	3.8
28	11	134	25	13	27	267	316	27	6.6	1.8	1.8	3.5
29	8.9	313	23	33	---	131	109	29	6.0	1.9	1.7	3.7
30	8.6	492	28	744	---	100	82	25	6.2	1.5	1.7	3.2
31	7.7	---	20	3410	---	77	---	22	---	1.6	1.2	---
MEAN	67.6	83.0	160	150	105	154	237	522	233	15.5	23.0	67.7
MAX	501	1170	2180	3410	1390	710	2480	3810	3830	84	207	967
MIN	0.45	5.3	11	12	23	30	34	22	6.0	1.5	0.51	0.51

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	47.3	57.8	71.6	70.1	139	81.9	134	254	269	30.7	26.6	31.5
MAX	67.6	83.0	160	149	193	154	237	522	425	52.6	45.3	67.7
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2000	2000	2000	2002
MIN	27.0	32.6	7.16	6.85	105	33.2	31.1	30.0	149	15.5	11.4	5.76
(WY)	2001	2001	2001	2000	2002	2000	2000	2001	2001	2002	2001	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 2000 - 2002
ANNUAL MEAN	79.8	152	106
HIGHEST ANNUAL MEAN			152
LOWEST ANNUAL MEAN			59.2
HIGHEST DAILY MEAN	3050	3830	4670
LOWEST DAILY MEAN	0.45	0.45	0.45
ANNUAL SEVEN-DAY MINIMUM	0.68	0.96	0.68
MAXIMUM PEAK FLOW	---	4800	6370
MAXIMUM PEAK STAGE	---	19.44	22.14
INSTANTANEOUS LOW FLOW	---	0.30	0.30
10 PERCENT EXCEEDS	120	272	157
50 PERCENT EXCEEDS	18	29	17
90 PERCENT EXCEEDS	2.9	1.9	2.9

384304090441801 BURGERMEISTER SPRING NEAR WELDON SPRING, MO

LOCATION.--Lat 38°43'04", long 90°44'18", in NW ¼ NW ¼ sec.30, T.46 N., R.03 E., St. Charles County, Hydrologic Unit 07110009, on right bank, 70 ft downstream of spring orifice, 0.1 mi upstream of August A. Busch Wildlife Area Lake 34, and 2.5 mi west of Weldon Spring.

RECHARGE AREA.--1.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1986 to current year. Record from May 1986 to September 1989 published in U.S. Geological Survey Open-File Report 90-552 and record from October 1989 to September 1995 published in U.S. Geological Survey Open-File Report 95-463.

GAGE.--Water-stage recorder and V-notch sharp-crested weir. Elevation of gage is 528 ft above sea level, from topographic map.

REMARKS.--Water-discharge records good.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.07	e0.35	e0.14	0.48	0.17	0.37	0.37	e0.28	0.09	0.06	0.04
2	0.05	0.05	e0.30	e0.13	0.42	0.36	0.38	0.37	e0.27	0.08	0.06	0.04
3	0.05	0.05	e0.25	e0.12	0.40	0.40	0.36	0.37	e0.27	0.08	0.05	0.04
4	0.05	0.05	e0.21	e0.15	0.37	0.38	0.34	0.37	e0.28	0.07	0.05	0.04
5	0.16	0.04	e0.18	e0.10	0.36	0.37	0.30	0.37	e0.38	0.06	0.05	0.05
6	0.28	0.04	0.17	e0.09	0.36	0.39	0.28	0.38	e0.37	0.06	0.06	0.05
7	0.07	0.04	0.13	e0.09	0.34	0.37	0.27	0.42	0.35	0.06	0.06	0.04
8	0.05	e0.04	0.11	e0.08	0.34	0.36	0.36	0.43	0.29	0.05	0.06	0.05
9	0.04	e0.04	0.10	e0.07	0.32	0.43	0.40	0.42	0.23	0.05	0.06	0.07
10	0.23	e0.04	0.09	e0.06	0.26	0.45	0.39	0.43	0.19	0.14	0.06	0.05
11	0.35	e0.04	0.08	e0.06	0.21	0.37	0.38	e0.35	0.21	0.32	0.05	0.06
12	0.38	e0.05	0.14	0.05	0.21	0.36	0.37	e0.39	0.37	0.20	0.05	0.04
13	0.30	e0.05	0.37	0.05	0.19	0.36	0.36	e0.43	0.29	0.11	0.06	0.04
14	0.32	e0.05	0.37	0.05	0.19	0.36	e0.36	e0.38	0.29	0.09	0.11	0.05
15	0.20	e0.04	0.36	0.04	0.18	0.36	e0.34	e0.36	0.28	0.07	0.15	0.06
16	0.35	e0.04	0.42	0.04	0.17	0.39	e0.33	e0.37	0.27	0.06	0.09	0.04
17	0.27	e0.04	0.45	0.04	0.15	0.38	e0.32	e0.39	0.26	0.06	0.08	0.16
18	0.16	e0.04	0.32	0.04	0.14	0.38	0.30	e0.36	0.24	0.06	0.19	0.33
19	0.10	e0.04	0.29	0.04	0.24	0.39	0.33	e0.34	0.21	0.05	0.28	0.29
20	0.08	e0.06	0.28	0.04	0.44	0.39	0.45	e0.33	0.18	0.05	0.16	0.29
21	0.06	e0.06	0.25	0.04	0.40	0.38	0.43	e0.32	0.17	0.05	0.10	0.29
22	0.06	e0.04	0.26	0.04	0.37	0.36	0.40	e0.31	0.15	0.06	0.08	0.26
23	0.06	e0.03	0.26	0.05	0.36	0.36	0.39	e0.31	0.15	0.11	0.17	0.16
24	0.10	e0.17	0.25	0.07	0.35	0.34	0.37	e0.31	0.14	0.10	0.30	0.10
25	0.30	e0.38	0.25	0.11	0.32	0.38	0.37	e0.30	0.13	0.06	0.19	0.09
26	0.18	e0.18	0.24	0.08	0.28	0.38	0.37	e0.30	0.13	0.06	0.13	0.08
27	0.37	e0.14	0.21	0.06	0.25	0.40	0.38	e0.29	0.12	0.06	0.08	0.08
28	0.26	e0.17	0.21	0.06	0.19	0.41	0.38	e0.29	0.11	0.06	0.05	0.07
29	0.12	e0.31	e0.19	0.08	---	0.39	0.37	e0.29	0.10	0.06	0.05	0.05
30	0.09	e0.47	e0.17	0.41	---	0.38	0.37	e0.28	0.09	0.06	0.04	0.05
31	0.09	---	e0.16	0.59	---	0.37	---	e0.28	---	0.06	0.04	---
MEAN	0.17	0.10	0.24	0.10	0.30	0.37	0.36	0.35	0.23	0.08	0.10	0.10
MAX	0.38	0.47	0.45	0.59	0.48	0.45	0.45	0.43	0.38	0.32	0.30	0.33
MIN	0.03	0.03	0.08	0.04	0.14	0.17	0.27	0.28	0.09	0.05	0.04	0.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1985 - 2002, BY WATER YEAR (WY)

	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	0.14	0.20	0.25	0.28	0.31	0.35	0.38	0.31	0.25	0.17	0.13	0.10	0.08	0.06	0.05	0.04	0.03	0.02
MAX	0.33	0.44	0.48	0.42	0.44	0.44	0.58	0.52	0.42	0.39	0.25	0.34	0.33	0.30	0.28	0.26	0.24	0.22
(WY)	1994	1995	1994	1994	1999	1989	1994	1995	1985	1997	1993	1993	1993	1993	1993	1993	1993	1993
MIN	0.05	0.03	0.03	0.03	0.10	0.12	0.12	0.11	0.09	0.08	0.06	0.04	0.03	0.02	0.01	0.01	0.01	0.01
(WY)	1998	2000	1999	2000	1996	2001	2000	2001	1991	2001	1996	1999	1999	1999	1999	1999	1999	1999

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1985 - 2002

ANNUAL MEAN	0.16	0.21	0.24
HIGHEST ANNUAL MEAN			0.33
LOWEST ANNUAL MEAN			0.13
HIGHEST DAILY MEAN	0.52	Jun 15	0.92
LOWEST DAILY MEAN	0.03	Several Days	0.02
ANNUAL SEVEN-DAY MINIMUM	0.03	Sep 25	0.02
MAXIMUM PEAK FLOW	---		0.68
MAXIMUM PEAK STAGE	---		2.32
INSTANTANEOUS LOW FLOW	---		0.02
10 PERCENT EXCEEDS	0.37		0.46
50 PERCENT EXCEEDS	0.09		0.19
90 PERCENT EXCEEDS	0.04		0.05

e Estimated

## DARDENNE CREEK BASIN

384304090441801 BURGERMEISTER SPRING NEAR WELDON SPRING, MO--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.-- July 1987 to current year. Record from July 1987 to September 1989 published in U.S. Geological Survey Open-File Report 90-552 and record from October 1989 to September 1995 published in U.S. Geological Survey Open-File Report 95-463.

GAGE.--Specific conductance mini-monitor.

REMARKS.--Daily specific conductance records good. During extreme cold when other surface-water bodies are frozen, the pond created behind the weir remains unfrozen because of the warmer spring water. Ducks will visit the pond during these times, stirring up the water and sediments causing specific conductance increases. This was observed in the record between December 26 and January 13.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily mean 1,130 microseimens per centimeter, many days in Aug. and Sept. 1991; minimum daily mean, 70 microseimens per centimeter, Jan. 21 and 22, 1997.

EXTREMES FOR CURRENT YEAR.--Maximum daily mean, 838 microseimens per centimeter, Nov. 23; minimum daily mean, 198 microseimens per centimeter, May 13.

SPECIFIC CONDUCTANCE, in  $\mu\text{S}/\text{cm}$  @ 25°C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	803	778	787	591	533	566	309	300	305	412	374	386
2	809	789	800	631	591	612	326	309	317	456	381	398
3	820	803	812	664	630	648	346	326	336	524	386	428
4	825	809	816	687	661	675	363	346	353	467	429	440
5	820	721	790	707	685	697	374	357	364	497	442	462
6	815	483	535	727	703	716	406	374	392	499	462	477
7	530	495	513	743	727	735	446	406	424	572	466	495
8	581	529	555	752	740	746	481	444	463	524	479	499
9	619	580	602	763	748	755	498	474	485	530	492	512
10	703	428	576	780	758	763	537	483	494	582	514	540
11	539	424	465	786	763	773	528	494	511	592	485	556
12	556	419	457	785	773	779	538	181	478	602	564	581
13	510	439	471	799	777	787	519	310	376	607	580	595
14	545	447	489	798	776	792	320	307	312	634	584	609
15	499	324	474	802	787	797	321	300	307	655	626	641
16	541	252	449	807	792	801	329	271	298	663	635	654
17	461	411	429	812	796	805	271	250	257	673	640	661
18	497	451	475	815	792	808	273	253	264	686	656	671
19	541	492	519	820	805	811	280	269	275	690	655	674
20	571	534	558	822	795	811	300	278	287	708	671	692
21	603	570	588	824	806	817	307	290	300	713	687	702
22	631	602	617	828	792	820	319	299	308	720	690	706
23	653	622	641	838	811	824	299	279	284	726	664	708
24	674	581	656	811	182	472	305	281	289	719	682	702
25	701	441	554	337	322	326	330	305	317	728	690	714
26	501	444	474	338	325	330	349	320	328	714	611	668
27	537	321	374	388	338	372	354	329	339	620	585	604
28	383	334	362	401	349	381	358	338	347	623	591	610
29	419	383	404	349	303	324	382	345	359	632	309	571
30	468	417	442	306	297	301	374	355	363	610	181	410
31	535	468	505	---	---	---	395	364	374	257	220	235
MONTH	825	252	554	838	182	661	538	181	352	728	181	568

384304090441801 BURGERMEISTER SPRING NEAR WELDON SPRING, MO--Continued

SPECIFIC CONDUCTANCE, in  $\mu\text{S}/\text{cm}$  @ 25°C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	236	220	228	420	362	392	369	297	347	366	322	335
2	236	232	233	396	118	287	313	283	293	390	348	366
3	255	233	240	256	237	245	318	286	300	375	365	369
4	264	247	255	261	245	253	373	318	335	393	339	370
5	278	260	268	278	261	268	405	339	367	350	333	339
6	300	275	287	278	255	263	437	380	403	396	346	375
7	314	289	296	273	256	265	463	410	437	396	168	299
8	325	295	307	288	273	281	440	131	353	274	250	261
9	331	307	315	292	258	278	293	276	280	265	246	255
10	348	316	331	266	256	260	287	278	281	277	20	235
11	391	344	368	280	266	274	297	284	288	234	216	224
12	429	374	397	294	280	286	335	297	316	251	201	224
13	423	388	402	341	292	301	357	335	346	209	190	198
14	456	399	418	342	305	320	358	354	356	244	209	223
15	447	399	409	332	272	320	369	355	359	254	235	244
16	456	403	420	341	279	298	384	369	374	280	251	262
17	445	416	429	300	279	288	411	384	399	273	244	260
18	461	426	437	308	271	294	434	409	421	269	237	250
19	465	137	382	293	270	281	446	136	397	309	261	276
20	332	244	258	297	282	288	401	247	269	343	267	297
21	254	245	248	312	283	291	272	251	259	330	295	311
22	280	254	269	332	312	326	270	260	265	345	322	336
23	315	280	297	356	332	347	279	270	275	384	340	359
24	323	304	310	372	354	363	308	275	292	410	363	387
25	348	314	323	372	183	317	306	299	303	438	373	397
26	361	320	342	298	275	286	333	306	316	433	389	408
27	355	325	338	288	266	277	367	175	326	436	397	413
28	363	329	350	272	260	264	294	284	288	451	418	435
29	---	---	---	289	268	275	328	294	305	470	426	445
30	---	---	---	307	277	285	331	301	315	479	442	459
31	---	---	---	335	307	320	---	---	---	485	442	463
MONTH	465	137	327	420	118	293	463	131	329	485	20	325
	JUNE			JULY			AUGUST			SEPTEMBER		
1	511	461	479	591	573	583	715	696	704	660	636	648
2	507	460	483	606	588	596	726	708	717	684	655	670
3	496	474	484	617	563	606	735	693	724	701	681	691
4	505	481	495	627	610	620	741	725	733	719	685	706
5	508	342	442	637	622	630	748	727	738	728	692	719
6	356	329	339	650	635	644	752	653	739	739	717	729
7	375	338	358	663	649	656	755	736	746	753	724	738
8	406	374	389	669	586	664	761	744	753	755	728	747
9	444	398	424	682	667	674	762	745	754	763	742	754
10	483	439	464	685	211	600	764	742	751	771	747	760
11	504	187	460	690	369	442	761	725	746	775	758	766
12	486	129	296	423	371	397	757	731	749	776	755	766
13	285	268	278	478	422	452	762	656	743	783	757	771
14	292	283	287	524	471	498	765	705	749	786	598	763
15	311	291	302	566	519	544	763	694	747	788	759	777
16	346	311	332	595	564	580	697	569	615	794	770	781
17	375	346	362	620	592	607	575	549	563	789	238	687
18	402	374	390	638	617	627	657	484	593	758	359	427
19	423	401	410	658	635	645	500	365	384	466	170	363
20	433	414	423	674	653	662	424	380	406	358	317	336
21	456	433	446	691	670	679	475	424	456	350	317	333
22	484	455	466	698	681	689	546	470	510	385	350	368
23	493	484	489	705	601	693	627	417	558	413	379	401
24	506	492	500	718	700	709	619	351	381	445	408	430
25	522	503	512	716	604	666	421	365	393	492	439	472
26	529	515	523	607	579	594	463	416	442	539	491	523
27	542	526	533	634	604	621	526	455	493	567	536	558
28	559	537	545	656	634	644	563	524	549	600	567	584
29	565	548	558	671	651	661	592	563	578	619	597	609
30	577	559	569	685	665	675	618	591	605	641	617	629
31	---	---	---	701	681	690	638	616	626	---	---	---
MONTH	577	129	435	718	211	614	765	351	621	794	170	617

## MISSISSIPPI RIVER MAIN STEM

05587450 MISSISSIPPI RIVER AT GRAFTON, IL

LOCATION.--Lat 38°58'05", long 90°25'42", in NE ¼ sec.15, T.6 N., R.12 W., Jersey County, Hydrologic Unit 07110009, on left bank 0.2 mi downstream from the mouth of Illinois River, 15.3 mi above Lock and Dam 26, 23.0 mi above mouth of Missouri River, and at mile 218.6 upstream of the mouth of Ohio River.

DRAINAGE AREA.--171,300 mi<sup>2</sup>, approximately.

## PERIOD OF RECORD.--

DISCHARGE: Intermittently from 1880 to 1928, computed daily 1928 to 1932 by the National Weather Service and/or the U.S. Army Corps of Engineers. Discharge previously published as "Mississippi River at Alton, IL" (05587500) October 1927 to September 1986.

GAGE HEIGHT: August 1879 through September 1892, 1929 to September 1986, October 1986 to current year. Stages also available from reports of the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 403.79 ft above National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder 15.3 mi downstream.

REMARKS.--Records poor. Natural flow of river affected by many navigation dams in upper Mississippi River Basin. Flood water from Missouri River overtops or breaches the levees at extremely high stages. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached an elevation of 435.89 ft, present datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	56100	85900	89800	54300	122000	106000	94200	293000	231000	183000	94700	119000
2	52700	85500	90600	51300	110000	101000	94600	294000	228000	182000	88600	114000
3	46100	89200	93400	55500	95900	96200	101000	290000	231000	182000	84900	109000
4	44500	87600	97100	61800	84200	94900	104000	282000	226000	177000	84900	103000
5	47900	91900	95500	60500	85100	86700	105000	272000	214000	172000	81000	96000
6	45200	91500	89600	52700	83600	83900	105000	271000	220000	165000	84600	85200
7	51400	86900	87400	49100	83700	91000	110000	292000	231000	157000	86700	77800
8	54700	79400	84700	64200	86400	94000	112000	315000	240000	146000	87200	76300
9	56600	84100	86000	66100	89800	85100	127000	306000	244000	142000	82400	74100
10	51000	82100	92300	59900	85900	111000	162000	291000	e250000	137000	85200	69300
11	47200	83200	98300	55700	88300	130000	180000	273000	261000	137000	85200	76800
12	47600	82600	103000	59100	91600	126000	167000	273000	279000	131000	86000	77700
13	56000	79400	97400	66900	95300	121000	150000	310000	290000	128000	90300	78200
14	55900	77200	99600	60400	98600	119000	151000	350000	e310000	121000	93200	78500
15	61300	76500	102000	55100	92600	119000	146000	374000	e315000	113000	94100	78000
16	61500	75900	103000	63200	86400	126000	146000	372000	e315000	100000	92200	78800
17	88300	73000	111000	60400	86200	125000	153000	365000	307000	96800	96400	83000
18	88800	74300	106000	58000	90700	123000	155000	358000	e290000	92500	91700	79700
19	85000	68800	92900	61400	87300	127000	162000	349000	272000	92200	96400	83100
20	87900	72700	92400	57800	80000	122000	173000	345000	253000	96400	101000	78000
21	83000	74800	92600	50500	82500	117000	191000	338000	237000	104000	96700	72100
22	80800	71800	95100	39500	93500	111000	218000	328000	225000	101000	96500	63500
23	95000	74100	90600	48000	99800	105000	224000	316000	216000	103000	104000	71500
24	103000	80900	75100	47300	102000	109000	224000	302000	208000	104000	146000	68900
25	108000	77700	58900	45400	101000	115000	232000	292000	204000	101000	168000	66500
26	96100	79200	61300	51200	92400	113000	241000	288000	200000	96300	164000	58800
27	92400	74100	47900	52000	95300	111000	245000	289000	189000	95600	159000	51600
28	102000	79600	38200	53600	103000	109000	267000	290000	176000	95800	146000	55000
29	93400	85100	34500	59300	---	109000	283000	285000	175000	92600	130000	60200
30	92900	91000	44900	64600	---	105000	290000	270000	182000	97500	125000	59200
31	94300	---	61700	104000	---	99400	---	249000	---	96300	123000	---
MEAN	71830	80530	84280	57700	92610	109400	170400	307200	240600	123800	104700	78090
MAX	108000	91900	111000	104000	122000	130000	290000	374000	315000	183000	168000	119000
MIN	44500	68800	34500	39500	80000	83900	94200	249000	175000	92200	81000	51600
IN.	0.48	0.52	0.57	0.39	0.56	0.74	1.11	2.07	1.57	0.83	0.70	0.51

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2002, BY WATER YEAR (WY)

MEAN	87890	91990	86960	78050	97830	144900	186300	205800	179900	149500	106000	83740
MAX	334900	171300	169900	161000	158000	217400	342100	333300	273400	469300	416900	309900
(WY)	1987	1987	1993	1993	1999	1997	1993	1993	2001	1993	1993	1993
MIN	28050	33270	31810	34800	40940	72220	72770	69140	36310	30420	37230	37850
(WY)	1989	1990	1990	1990	1989	1989	2000	1988	1988	1988	1988	1988

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1987 - 2002
ANNUAL MEAN	143600	126900	125000
HIGHEST ANNUAL MEAN			250700
LOWEST ANNUAL MEAN			53860
HIGHEST DAILY MEAN	366000	May 19	596000
LOWEST DAILY MEAN	34500	Dec 29	20100
ANNUAL SEVEN-DAY MINIMUM	40900	Jan 6	23600
MAXIMUM PEAK FLOW	---		380000
MAXIMUM PEAK STAGE	---		431.45
INSTANTANEOUS LOW FLOW	---		27100
ANNUAL RUNOFF (INCHES)	11.38		10.06
10 PERCENT EXCEEDS	299000		272000
50 PERCENT EXCEEDS	92900		95600
90 PERCENT EXCEEDS	49600		57900

e Estimated



## MISSISSIPPI RIVER MAIN STEM

83

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL  
(National Stream-Quality Accounting Network)  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 38°57'04", long 90°22'16", in sec.24, T.6 N., R.11 W., Jersey County, Hydrologic Unit 07110009, 11.3 mi above Lock and Dam 26, 19.0 mi above mouth of Missouri River, and at mile 214.6 upstream from the mouth of the Ohio River.

DRAINAGE AREA.--171,300 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--March 1989 to current year. National Stream-Quality Accounting Network station September 1989 to October 1992. Ambient Water-Quality Monitoring Network and National Stream-Quality Accounting Network station November 1992 to current year.

REMARKS.--Sediment records fair.

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: October 1989 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 1,910 mg/L, May 23, 1990; minimum daily mean, 1 mg/L, Sept. 10, 1991.  
SUSPENDED-SEDIMENT LOAD: Maximum daily, 1,090,000 tons, May 23, 1990; minimum daily, 186 tons, Sept. 10, 1991.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 737 mg/L, May 7; minimum daily mean, 40 mg/L, Sept. 30.  
SUSPENDED-SEDIMENT LOAD: Maximum daily, 599,000 tons, May 8; minimum daily, 5,050 tons, Jan. 22.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	UV ABSORB- ANCE 254 NM, WTR FLT (units /cm) (50624)	UV ABSORB- ANCE 280 NM, WTR FLT (units /cm) (61726)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00300)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	
OCT 15...	1420	ENVIRONMENTAL	61300	1.1	.146	.107	10.7	109	8.2	471	15.9	200
NOV 19...	1325	ENVIRONMENTAL	68800	20	.132	.094	12.8	120	8.7	535	12.2	250
DEC 03...	1325	ENVIRONMENTAL	93400	31	.134	.100	11.1	96	8.3	512	8.4	230
03...	1333	BLANK	--	--	<.004	<.004	--	--	--	--	--	--
JAN 16...	1310	ENVIRONMENTAL	63200	14	<.004	.101	18.5	133	8.3	386	1.3	230
FEB 11...	1415	ENVIRONMENTAL	88300	110	.126	.093	15.9	122	8.4	512	3.2	240
MAR 12...	1345	ENVIRONMENTAL	126000	70	.116	.083	13.7	109	8.5	546	4.9	250
APR 01...	1405	ENVIRONMENTAL	94200	76	.117	.087	14.4	123	8.7	549	7.7	230
MAY 06...	1405	ENVIRONMENTAL	271000	84	.171	.128	9.0	92	8.1	377	15.5	160
06...	1440	BLANK	--	--	--	--	--	--	--	--	--	--
JUN 03...	1355	ENVIRONMENTAL	231000	55	.178	.131	8.1	99	8.0	454	24.0	190
JUL 08...	1410	ENVIRONMENTAL	146000	36	.183	.132	5.9	80	8.1	434	31.0	180
AUG 12...	1425	ENVIRONMENTAL	86000	18	.218	.157	9.6	126	8.7	374	28.7	170
SEP 09...	1415	ENVIRONMENTAL	74100	18	.205	.148	9.1	117	8.2	392	27.7	170

## MISSISSIPPI RIVER MAIN STEM

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL--Continued  
(National Stream-Quality Accounting Network)  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ALKA- LINITY WAT DIS FIX END FIELD (mg/L as CaCO <sub>3</sub> ) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD (mg/L as CaCO <sub>3</sub> ) (39086)	BICAR- BONATE WATER DIS IT FIELD (mg/L as HCO <sub>3</sub> ) (00453)	CAR- BONATE WATER DIS IT FIELD (mg/L as CO <sub>3</sub> ) (00452)	CHLO- RIDE, DIS- SOLVED (mg/L as CL) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SILICA, DIS- SOLVED (mg/L as SiO <sub>2</sub> ) (00955)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDEED (mg/L) (00530)
OCT 15...	45.8	20.5	3.95	20.5	148	150	183	0	34.2	.2	6.3	35.2	--
NOV 19...	56.4	25.4	3.21	16.9	181	182	200	11	35.2	.2	4.1	38.6	--
DEC 03...	53.6	24.3	3.12	17.9	176	178	217	4	29.5	.2	4.4	38.1	62
DEC 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	54.8	23.2	2.61	18.5	175	175	203	5	29.7	.2	7.5	35.6	--
FEB 11...	56.9	23.5	3.04	19.6	168	168	194	6	35.6	.2	6.4	41.1	--
MAR 12...	58.9	24.1	2.69	19.6	190	184	218	7	38.2	.2	5.0	41.0	480
APR 01...	51.9	23.8	2.49	23.3	164	160	178	9	40.6	.2	3.0	42.3	--
MAY 06...	39.6	15.8	2.86	11.4	128	126	154	0	19.0	E.1	7.0	29.0	--
MAY 06...	.02	<.008	E.08	<.09	--	--	--	--	<.30	<.1	<.2	<.1	--
JUN 03...	46.0	17.7	2.90	11.7	131	132	161	0	24.6	.2	4.7	34.8	--
JUL 08...	43.7	18.0	2.79	11.1	140	140	170	0	19.1	.2	8.0	31.0	43
AUG 12...	38.8	17.7	2.84	12.1	137	136	151	7	20.0	.2	4.2	25.4	--
SEP 09...	41.6	17.2	3.25	12.5	128	128	156	0	18.6	.2	7.7	23.1	--
DATE	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC DIS. (mg/L as N) (00623)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	NITRO- GEN, PAR TICULATE WAT FLT SUSP (mg/L as N) (49570)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (mg/L as C) (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (mg/L as C) (00688)	CARBON, ORGANIC DIS- SOLVED (mg/L as C) (00681)
OCT 15...	284	E.02	.47	.82	1.35	.017	.52	.144	.125	.21	3.2	<.1	5.4
NOV 19...	316	<.04	.41	1.1	1.92	.008	.68	.055	.042	.161	4.1	<.1	5.2
DEC 03...	372	<.04	.45	.95	1.86	.012	.34	.096	.079	.20	3.5	<.1	5.0
DEC 03...	--	--	--	--	--	--	<.02	--	--	--	<.1	<.1	.9
JAN 16...	314	E.02	.38	.95	2.82	.014	.30	.065	.051	.141	2.6	<.1	5.4
FEB 11...	316	E.03	.40	1.8	4.51	.025	.76	.107	.089	.41	6.6	<.1	4.8
MAR 12...	332	<.04	.36	1.3	3.96	.016	.67	.049	.030	.26	4.8	.4	4.7
APR 01...	326	<.04	.40	1.4	3.32	.018	.98	.026	.014	.26	6.7	<.1	4.8
MAY 06...	227	<.04	.46	1.2	2.67	.022	.51	.069	.053	.28	5.4	<.1	5.8
MAY 06...	<10	--	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	270	<.04	.54	1.1	3.93	.040	.37	.089	.066	.24	3.3	<.1	5.5
JUL 08...	248	<.04	.42	.88	3.08	.029	.38	.127	.114	.20	2.7	<.1	5.8
AUG 12...	231	<.04	.49	1.0	.59	.014	.60	.098	.080	.184	3.2	<.1	7.8
SEP 09...	233	<.04	.47	.82	1.29	.017	.42	.135	.111	.19	2.5	<.1	7.3

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL--Continued  
(National Stream-Quality Accounting Network)  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CARBON, ORGANIC PARTIC- ULATE TOTAL (mg/L as C) (00689)	PHEO- PHYTIN A, PHYTO- PHYTON (µg/L) (62360)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µM-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (µg/L) (70953)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)
OCT 15...	3.2	39.2	K87	145	75	31.7	--	--	--	--	--	--	--
NOV 19...	4.1	46.2	K7	K8	K2	49.9	--	--	--	--	--	--	--
DEC 03...	3.4	33.4	K92	K98	165	30.0	M	670	<8	<.1	<6	<10	.09
DEC 03...	<.1	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	2.5	10.8	K1	K5	K4	63.0	--	--	--	--	--	--	--
FEB 11...	6.6	24.1	<4	K8	K67	54.5	--	--	--	--	--	--	--
MAR 12...	4.5	28.4	K35	23	46	65.3	<20	1060	<8	<.1	<6	E7	<.08
APR 01...	6.7	41.4	K11	LA	26	89.4	--	--	--	--	--	--	--
MAY 06...	5.3	19.3	K30	K36	K40	27.4	<20	1300	<8	.2	<6	15	.11
MAY 06...	--	--	--	--	--	--	<20	E20	<8	<.1	<6	<10	<.08
JUN 03...	3.3	25.1	K8	K25	K5	31.9	--	--	--	--	--	--	--
JUL 08...	2.5	18.4	K4	K6	35	20.9	<20	760	<8	<.1	<6	<10	E.06
AUG 12...	3.1	23.1	K3	K8	K4	68.5	--	--	--	--	--	--	--
SEP 09...	2.5	24.5	K1	K8	K40	49.0	--	--	--	--	--	--	--

DATE	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL- ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	--	--	--	--	--	<.002	<.004	<.002	<.005	.077	<.010	<.002	<.041
DEC 03...	2	18.0	<.01	<24	<20	<.002	.061	<.002	<.005	.134	<.010	<.002	<.041
DEC 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	<.006	.085	<.010	<.005	.118	<.010	<.002	<.041
FEB 11...	--	--	--	--	--	<.006	.036	<.004	<.005	.199	<.010	<.002	<.041
MAR 12...	3	5.4	E.01	<24	<20	<.006	.028	<.004	<.005	.136	<.010	<.002	<.041
APR 01...	--	--	--	--	--	<.006	.011	<.004	<.005	.116	<.010	<.002	<.041
MAY 06...	4	E2.7	.01	<24	<20	<.006	.503	.041	<.005	3.76	<.010	<.002	<.041
MAY 06...	<1	<2.0	<.01	<24	<20	--	--	--	--	--	--	--	--
JUN 03...	--	--	--	--	--	<.006	.610	.029	<.005	3.64	<.010	<.002	<.041
JUL 08...	2	E.9	E.01	<24	<20	<.006	.481	.018	<.005	1.32	<.010	<.002	<.041
AUG 12...	--	--	--	--	--	<.006	.055	.007	<.005	.477	<.010	<.002	<.041
SEP 09...	--	--	--	--	--	<.006	.023	<.004	<.005	.228	<.010	<.002	<.041

## MISSISSIPPI RIVER MAIN STEM

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL--Continued  
(National Stream-Quality Accounting Network)  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	<.020	<.005	<.018	<.003	E.059	.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
DEC 03...	<.020	<.005	<.018	<.003	E.025	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004
JAN 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	<.020	<.005	<.018	<.003	E.035	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004
FEB 11...	<.020	<.005	<.018	<.003	E.064	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
MAR 12...	<.020	<.005	<.018	<.003	E.028	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
APR 01...	<.020	<.005	<.018	<.003	E.034	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
MAY 06...	<.020	<.005	<.018	<.003	E.192	.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
JUN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	<.020	<.005	<.018	<.003	E.205	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
JUL 08...	<.020	<.005	<.018	<.003	E.144	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
AUG 12...	<.020	<.005	<.018	<.003	E.105	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
SEP 09...	<.020	<.005	<.018	<.003	E.068	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
DATE	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)	PEB- ULATE WATER FILTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	<.035	<.027	<.050	<.006	.023	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006
DEC 03...	<.035	<.027	<.050	<.006	.033	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006
JAN 03...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	<.035	<.027	<.050	<.006	.030	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
FEB 11...	<.035	<.027	<.050	<.060	.103	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
MAR 12...	<.035	<.027	<.050	<.006	.044	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
APR 01...	<.035	<.027	<.050	<.006	.033	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
MAY 06...	<.035	<.027	<.050	.100	.679	.011	<.002	<.007	<.003	<.010	<.004	<.022	<.006
JUN 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
JUN 03...	<.035	<.027	<.050	<.006	.700	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
JUL 08...	<.035	<.027	<.050	<.020	.217	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
AUG 12...	<.035	<.027	<.050	<.006	.067	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
SEP 09...	<.035	<.027	<.050	<.100	.062	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL--Continued  
(National Stream-Quality Accounting Network)  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 19...	<.011	<.01	<.004	<.010	<.011	<.02	.040	<.02	<.034	<.02	<.005	<.002	<.009
DEC 03... 03...	<.011 --	E.01 --	<.004 --	<.010 --	<.011 --	<.02 --	.133 --	<.02 --	<.034 --	<.02 --	<.005 --	<.002 --	<.009 --
JAN 16...	<.011	<.01	<.004	<.010	<.011	<.02	.010	<.02	<.034	<.02	<.005	.004	<.009
FEB 11...	<.011	M	<.004	<.010	<.011	<.02	.029	<.02	<.034	<.02	<.005	.003	<.009
MAR 12...	<.011	M	<.004	<.010	<.011	<.02	.025	<.02	<.034	<.02	<.005	<.002	<.009
APR 01...	<.011	M	<.004	<.010	<.011	<.02	.018	<.02	<.034	<.02	<.005	<.002	<.009
MAY 06... 06...	<.011 --	E.01 --	<.004 --	<.010 --	<.011 --	<.02 --	.153 --	<.02 --	<.034 --	<.02 --	<.005 --	<.002 --	<.009 --
JUN 03...	<.011	E.01	<.004	<.010	<.011	<.02	.126	<.02	<.034	<.02	<.005	<.002	<.009
JUL 08...	<.011	E.01	<.004	<.010	<.011	<.02	.019	<.02	<.034	<.02	<.005	<.002	<.009
AUG 12...	<.011	E.01	<.004	<.010	<.011	<.02	.016	<.02	<.034	<.02	<.005	<.002	<.009
SEP 09...	<.011	E.01	<.004	<.010	<.011	<.02	.013	<.02	<.034	<.02	<.005	<.002	<.009

DATE	SED. SUSP. SIEVE DIAM. % FINER THAN .062 mm (70331)	SEDI- MENT, SUS- PENDEED (mg/L) (80154)
OCT 15...	85	132
NOV 19...	98	50
DEC 03... 03...	96 --	65 --
JAN 16...	73	96
FEB 11...	98	95
MAR 12...	97	296
APR 01...	99	85
MAY 06... 06...	90 --	216 --
JUN 03...	80	170
JUL 08...	85	92
AUG 12...	94	34
SEP 09...	94	33

K--Results based on colony count outside the acceptable range (non-ideal colony count).  
E--Laboratory estimated value.  
M--Presence of material verified, but not quantified.  
<--Numeric result is less than the value shown.  
LA--Laboratory accident.

## MISSISSIPPI RIVER MAIN STEM

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL--Continued  
 (National Stream-Quality Accounting Network)  
 (Ambient Water-Quality Monitoring Network)

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	56100	96	14400	85900	139	32300	89800	114	27700
2	52700	77	10900	85500	101	23400	90600	99	24200
3	46100	74	9190	89200	101	24300	93400	89	22500
4	44500	71	8540	87600	106	25100	97100	86	22500
5	47900	70	8990	91900	142	35100	95500	86	22300
6	45200	73	8930	91500	113	27900	89600	82	19700
7	51400	68	9460	86900	99	23300	87400	87	20500
8	54700	69	10200	79400	103	22000	84700	79	18000
9	56600	61	9280	84100	86	19500	86000	75	17500
10	51000	59	8180	82100	78	17200	92300	89	22300
11	47200	66	8420	83200	74	16700	98300	99	26400
12	47600	78	9980	82600	81	18000	103000	96	26500
13	56000	93	14000	79400	82	17700	97400	77	20300
14	55900	96	14500	77200	75	15500	99600	91	24400
15	61300	95	15700	76500	64	13300	102000	115	31700
16	61500	101	16800	75900	59	12200	103000	127	35200
17	88300	135	32100	73000	52	10300	111000	144	43200
18	88800	148	35500	74300	66	13200	106000	130	37200
19	85000	154	35500	68800	86	15900	92900	133	33500
20	87900	145	34400	72700	78	15300	92400	127	31700
21	83000	111	25000	74800	70	14100	92600	98	24600
22	80800	100	21900	71800	63	12100	95100	121	31000
23	95000	123	32100	74100	71	14200	90600	133	32700
24	103000	191	53400	80900	85	18600	75100	86	17500
25	108000	224	65200	77700	76	15900	58900	81	12900
26	96100	206	53600	79200	72	15400	61300	81	13400
27	92400	181	45200	74100	69	13900	47900	86	11200
28	102000	154	42500	79600	73	15700	38200	66	6780
29	93400	144	36300	85100	79	18100	34500	56	5210
30	92900	177	44300	91000	87	21400	44900	73	9240
31	94300	170	43200	---	---	---	61700	65	10900
JANUARY			FEBRUARY			MARCH			
1	54300	58	8570	122000	417	138000	106000	129	37000
2	51300	54	7510	110000	278	82700	101000	132	36000
3	55500	50	7510	95900	222	57300	96200	132	34300
4	61800	47	7780	84200	261	59200	94900	132	33900
5	60500	46	7470	85100	258	59400	86700	128	30000
6	52700	47	6710	83600	157	35400	83900	113	25600
7	49100	57	7630	83700	132	29700	91000	111	27300
8	64200	86	15100	86400	146	34200	94000	139	35300
9	66100	93	16600	89800	175	42400	85100	176	40500
10	59900	70	11300	85900	166	38600	111000	181	54500
11	55700	59	8800	88300	163	38900	130000	196	68900
12	59100	50	8010	91600	111	27500	126000	209	70800
13	66900	64	11500	95300	99	25600	121000	292	95400
14	60400	72	11700	98600	135	36000	119000	267	86000
15	55100	73	10900	92600	110	27500	119000	263	84700
16	63200	73	12500	86400	109	25700	126000	223	76200
17	60400	60	9770	86200	93	21600	125000	198	67200
18	58000	59	9230	90700	124	30300	123000	144	47900
19	61400	65	10800	87300	132	31200	127000	150	51300
20	57800	45	6970	80000	102	22000	122000	184	60600
21	50500	46	6310	82500	83	18500	117000	213	67300
22	39500	47	5050	93500	122	30900	111000	191	57000
23	48000	48	6230	99800	179	48200	105000	143	40700
24	47300	49	6260	102000	189	52300	109000	114	33600
25	45400	54	6620	101000	167	45700	115000	140	43600
26	51200	51	6990	92400	137	34100	113000	152	46400
27	52000	51	7210	95300	136	34800	111000	136	40900
28	53600	47	6750	103000	114	31700	109000	144	42500
29	59300	46	7380	---	---	---	109000	177	52300
30	64600	72	12600	---	---	---	105000	155	43900
31	104000	264	80600	---	---	---	99400	148	39800

## MISSISSIPPI RIVER MAIN STEM

89

05587455 MISSISSIPPI RIVER BELOW GRAFTON, IL--Continued  
(National Stream-Quality Accounting Network)  
(Ambient Water-Quality Monitoring Network)

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
DAY									
	APRIL			MAY			JUNE		
1	94200	162	41200	293000	311	247000	231000	199	124000
2	94600	168	42800	294000	319	254000	228000	179	110000
3	101000	169	45800	290000	280	219000	231000	185	115000
4	104000	147	41400	282000	231	176000	226000	165	101000
5	105000	159	44800	272000	222	163000	214000	175	101000
6	105000	189	53800	271000	292	214000	220000	196	116000
7	110000	189	56300	292000	737	584000	231000	176	110000
8	112000	164	49400	315000	706	599000	240000	185	119000
9	127000	184	64000	306000	316	261000	244000	225	150000
10	162000	282	124000	291000	286	225000	250000	287	194000
11	180000	358	173000	273000	290	213000	261000	445	315000
12	167000	311	140000	273000	379	280000	279000	524	397000
13	150000	295	119000	310000	324	271000	290000	323	253000
14	151000	294	120000	350000	270	255000	310000	260	218000
15	146000	267	105000	374000	183	185000	315000	185	157000
16	146000	303	120000	372000	185	186000	315000	331	277000
17	153000	291	120000	365000	179	176000	307000	226	187000
18	155000	250	105000	358000	181	174000	290000	179	140000
19	162000	245	107000	349000	227	213000	272000	201	148000
20	173000	245	114000	345000	295	274000	253000	209	143000
21	191000	266	138000	338000	274	250000	237000	201	128000
22	218000	416	245000	328000	269	238000	225000	172	104000
23	224000	321	194000	316000	307	262000	216000	191	111000
24	224000	380	230000	302000	299	244000	208000	178	99800
25	232000	582	365000	292000	243	191000	204000	151	83400
26	241000	534	348000	288000	223	173000	200000	135	72900
27	245000	374	247000	289000	230	179000	189000	148	75600
28	267000	482	348000	290000	236	185000	176000	170	80300
29	283000	413	315000	285000	214	164000	175000	190	89800
30	290000	369	290000	270000	238	173000	182000	208	102000
31	---	---	---	249000	268	181000	---	---	---
	JULY			AUGUST			SEPTEMBER		
1	183000	209	103000	94700	110	28300	119000	177	56600
2	182000	191	93800	88600	116	27700	114000	165	50900
3	182000	175	86200	84900	106	24300	109000	140	41200
4	177000	164	78200	84900	107	24600	103000	95	26600
5	172000	133	62100	81000	101	22000	96000	94	24400
6	165000	118	52500	84600	105	24100	85200	94	21600
7	157000	119	50200	86700	110	25900	77800	97	20400
8	146000	112	44000	87200	110	26000	76300	91	18800
9	142000	132	50500	82400	94	20800	74100	79	15900
10	137000	117	43400	85200	89	20500	69300	76	14200
11	137000	120	44300	85200	86	19800	76800	86	17800
12	131000	114	40300	86000	80	18700	77700	86	18000
13	128000	116	40200	90300	82	20000	78200	83	17500
14	121000	102	33400	93200	95	23900	78500	85	18000
15	113000	98	29900	94100	114	29100	78000	79	16600
16	100000	96	26000	92200	112	28000	78800	82	17500
17	96800	89	23200	96400	132	34400	83000	76	17100
18	92500	84	21000	91700	143	35500	79700	71	15300
19	92200	77	19100	96400	140	36300	83100	76	17000
20	96400	86	22500	101000	114	31000	78000	85	17800
21	104000	95	26600	96700	109	28400	72100	87	16800
22	101000	105	28600	96500	112	29300	63500	110	18800
23	103000	92	25500	104000	126	35400	71500	85	16400
24	104000	95	26800	146000	259	103000	68900	62	11600
25	101000	91	24700	168000	329	150000	66500	77	13900
26	96300	89	23200	164000	303	135000	58800	72	11500
27	95600	70	18000	159000	260	111000	51600	53	7440
28	95800	67	17200	146000	244	96300	55000	54	8030
29	92600	64	16200	130000	237	83500	60200	52	8390
30	97500	96	25300	125000	237	80100	59200	40	6350
31	96300	98	25400	123000	197	65200	---	---	---

## MISSOURI RIVER MAIN STEM

06813500 MISSOURI RIVER AT RULO, NE

LOCATION.--Lat 40°03'13", long 95°25'19", in NW $\frac{1}{4}$  NW $\frac{1}{4}$  sec.17, T.1 N., R.18 E., Richardson County, Hydrologic Unit 10240005, on right bank at downstream side of bridge on U.S. Highway 159 at Rulo, 3.2 mi upstream from Big Nemaha River, and at mile 498.0.

DRAINAGE AREA.--414,900 mi<sup>2</sup>, approximately. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

PERIOD OF RECORD.--October 1949 to current year in reports of U.S. Geological Survey. Gage-height record collected at site 80 ft upstream January 1886 to December 1899 published in reports of Missouri River Commission; September 1929 to September 1950 in files of Kansas City office of U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is 837.23 ft above National Geodetic Vertical Datum of 1929. Oct. 1949 to Sept. 12, 1950, nonrecording gage at site 80 ft upstream and Sept. 13, 1950 to Apr. 19, 1983, recording gage on downstream end of middle pier, all at same datum.

REMARKS.--Records good. Flow regulated by upstream main-stem reservoirs. Fort Randall Dam was completed in July 1952, with storage beginning in December 1952. Gavins Point Dam was completed in July 1955, with storage beginning in December 1955. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 358,000 ft<sup>3</sup>/s Apr. 22, 1952, gage height, 25.60 ft; minimum daily discharge, 4,420 ft<sup>3</sup>/s Jan. 13, 1957; minimum gage height, -0.19 ft Dec. 25, 1990, result of freezeup.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in 1881 reached a stage of 22.9 ft, from floodmark, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35000	35700	34700	21300	22100	22900	35100	35000	37100	31500	28000	35100
2	35100	36000	32300	21200	19800	22100	35500	34300	35400	31200	27800	34400
3	35500	36200	30600	21200	19200	22200	36200	34100	34600	30900	27600	34300
4	35600	36400	28800	21300	20000	21600	36800	34500	34400	30900	27600	34500
5	35700	36500	27900	21500	20200	20000	36200	34200	34300	30800	28000	34200
6	35600	36500	27900	21900	20200	20900	35600	36700	33800	30300	29200	34000
7	35300	36300	27900	22500	20900	22600	34700	36200	33400	30100	31000	34000
8	35100	36400	28100	24200	21700	23600	33500	34400	32900	30100	32700	34200
9	35000	36400	27700	24800	23300	24000	34200	33900	32200	30000	30900	34100
10	35700	36300	27100	23500	24600	23400	34300	33500	32600	30500	29900	34000
11	36800	36400	26700	23600	25300	23100	34500	34300	33100	30300	29900	33900
12	36200	36400	26600	25100	25300	23400	35200	41400	35300	30900	29700	34200
13	37400	36300	26200	25900	25800	23700	35600	44600	47300	32400	30400	34400
14	38500	36200	25700	26400	25900	25300	34700	43000	49800	31500	32200	34700
15	36900	36700	25800	26900	26500	30300	34500	39900	43300	29800	30300	34800
16	36100	36500	25800	26600	25800	33600	34400	38600	39000	29600	30200	35300
17	35800	36600	25400	25800	26100	30500	34700	38100	37900	29100	30600	34900
18	35500	36800	25000	24700	26700	28100	34700	37100	37100	28700	31800	34100
19	35500	36800	25200	24500	26600	26900	34800	37100	36000	28400	35300	33900
20	35600	36600	25000	24700	27000	26600	35100	35900	35300	28200	37600	34200
21	35400	36000	24800	24100	27000	26800	34700	35100	34600	27900	38300	34600
22	35000	36000	24800	23100	26600	28100	34400	34500	34300	27600	36700	33900
23	35700	36200	24100	23000	26000	30500	33800	34800	34500	27600	44400	33200
24	35800	36700	24200	23100	25500	31800	34000	35600	34000	27900	51500	32600
25	35500	38300	24300	22900	25300	33400	33800	36000	33300	28100	42900	32100
26	35500	39700	23300	23200	25400	34200	33200	37300	32500	28600	41100	32000
27	35300	40400	21900	23700	25500	33500	33200	35800	32000	29300	38400	32600
28	35300	38900	21700	24700	24700	33900	34400	35800	32100	30800	36600	33400
29	35400	38000	21300	25000	---	34900	34400	37700	32200	29400	35600	33400
30	35100	36800	21200	24000	---	34600	34800	37900	32000	28400	35300	33800
31	35100	---	21900	22900	---	34600	---	37400	---	28300	36100	---
MEAN	35710	36830	25930	23780	24250	27450	34700	36600	35540	29650	33790	33960
MAX	38500	40400	34700	26900	27000	34900	36800	44600	49800	32400	51500	35300
MIN	35000	35700	21200	21200	19200	20000	33200	33500	32000	27600	27600	32000
IN.	0.10	0.10	0.07	0.07	0.06	0.08	0.09	0.10	0.10	0.08	0.09	0.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1953 - 2002<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	44780	41100	27350	22870	28600	41190	51370	51900	56710	50730	44890	45060
MAX	80050	83880	57380	42280	53140	79590	106100	97280	130600	164800	78730	76410	
(WY)	1998	1998	1998	1973	1997	1979	1997	1997	1984	1993	1996	1997	
MIN	25580	17000	9953	10800	13220	15380	21820	33790	33710	29650	29820	33960	
(WY)	1962	1962	1956	1957	1957	1957	1957	1956	1956	2002	1955	2002	
SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR				FOR 2002 WATER YEAR				WATER YEARS 1953 - 2002 <sup>a</sup>				
ANNUAL MEAN	40580				31540				42250				
HIGHEST ANNUAL MEAN									71880				1997
LOWEST ANNUAL MEAN									26340				1957
HIGHEST DAILY MEAN	103000				May 6				51500				Aug 24 1993
LOWEST DAILY MEAN	20600				Feb 19				19200				Feb 3 1957
ANNUAL SEVEN-DAY MINIMUM	21700				Jan 31				20300				Feb 2 1955
MAXIMUM PEAK FLOW	---								59500				Aug 24 1993
MAXIMUM PEAK STAGE	---								13.71				Aug 24 1993
INSTANTANEOUS LOW FLOW	---								18900				Feb 3 1993
ANNUAL RUNOFF (INCHES)	1.33								1.03				1.38
10 PERCENT EXCEEDS	65600								36800				66900
50 PERCENT EXCEEDS	36300								33500				38700
90 PERCENT EXCEEDS	22700								23400				19000

<sup>a</sup> Post\_regulation period.



06815555 DAVIS CREEK AT MOUND CITY, MO

LOCATION.--Lat 40°07'47", long 95°13'50", in NE 1/4 NE 1/4 NW 1/4 sec.6, T.61 N., R.38 W., Holt County, Hydrologic Unit 10240005, on left bank at downstream side of Highway E bridge, in Mound City.

DRAINAGE AREA.--22.9 mi<sup>2</sup>.

PERIOD OF RECORD.--Jan. 20, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.9	5.9	5.8	e2.9	e4.2	e4.0	2.9	5.2	4.9	1.9	e1.4	0.98
2	7.0	5.2	5.9	e2.7	e3.2	e3.8	2.9	5.3	4.7	2.0	e1.3	0.79
3	6.6	5.1	5.5	e2.7	e3.2	e3.0	2.9	5.1	4.3	2.1	e1.3	0.86
4	7.4	5.8	6.6	e2.9	3.0	e2.8	3.2	4.8	5.0	2.3	e1.3	0.82
5	11	6.1	7.8	e3.5	3.0	e3.2	3.4	4.4	5.0	2.3	e1.3	0.80
6	7.4	6.2	8.7	e3.9	3.3	e3.5	3.4	28	5.0	1.8	e1.1	0.69
7	6.5	5.6	8.3	e3.5	3.6	3.4	3.2	11	5.0	1.6	0.79	0.60
8	6.0	5.7	7.3	e3.2	4.1	3.7	4.3	8.5	5.0	1.6	0.63	0.71
9	5.8	5.7	8.8	e4.5	5.2	e3.2	4.7	8.6	5.4	1.4	0.64	0.60
10	6.8	5.8	6.9	5.1	5.1	e3.5	4.0	6.7	4.7	1.4	0.62	0.57
11	6.1	5.7	6.3	e5.2	6.1	3.8	4.5	16	5.7	1.4	0.63	0.64
12	6.1	5.6	7.1	4.9	4.4	3.7	11	19	7.5	7.5	0.60	0.66
13	12	5.7	6.7	4.7	4.1	3.2	4.9	10	6.3	2.8	15	0.63
14	7.6	5.8	6.2	4.5	3.8	3.1	4.4	9.0	5.9	2.0	2.7	0.70
15	14	5.8	5.9	e5.0	3.6	3.0	4.1	8.0	5.2	1.9	1.9	0.64
16	10	5.5	5.6	e3.5	3.2	3.0	3.9	7.2	4.2	1.9	1.9	0.63
17	7.8	5.5	5.2	e3.4	3.0	3.2	3.9	8.1	3.7	1.7	2.4	0.64
18	7.4	5.7	5.1	e3.4	3.2	3.3	4.1	8.0	3.9	1.7	1.8	0.69
19	6.4	6.2	5.3	e3.5	4.9	3.4	3.8	6.8	3.0	1.8	2.5	0.63
20	5.9	6.4	5.2	e3.7	5.3	3.4	4.3	6.6	2.6	1.4	47	0.70
21	5.7	6.5	5.1	e3.5	4.2	3.6	4.7	7.0	2.5	1.3	5.4	0.53
22	6.4	6.4	5.4	4.1	3.5	3.4	4.4	6.7	3.9	1.2	2.7	0.45
23	6.5	6.2	e4.5	4.0	3.7	3.9	4.4	6.7	3.8	1.2	3.2	0.51
24	6.6	12	e4.1	e3.4	4.0	3.9	4.6	7.1	2.8	1.1	1.9	0.59
25	5.6	8.7	e3.9	e3.4	3.8	4.2	4.2	8.9	2.4	1.4	1.6	0.62
26	5.6	6.6	e3.9	3.6	3.4	4.0	4.2	7.9	2.4	2.9	1.4	0.63
27	5.6	5.8	e4.3	3.8	e3.4	4.8	8.0	9.1	3.6	6.8	1.2	0.77
28	6.1	5.5	e4.3	3.5	e3.5	5.3	6.8	8.5	2.2	2.7	1.2	e0.75
29	6.2	5.6	e3.7	3.0	---	6.2	5.5	7.8	2.3	2.5	1.4	e0.70
30	6.2	5.7	e3.5	2.8	---	3.0	5.0	7.0	2.2	2.1	1.1	e0.70
31	6.3	---	e3.2	e3.5	---	2.6	---	6.3	---	1.7	1.0	---
MEAN	7.14	6.13	5.68	3.72	3.89	3.62	4.52	8.69	4.17	2.17	3.51	0.67
MAX	14	12	8.8	5.2	6.1	6.2	11	28	7.5	7.5	47	0.98
MIN	5.6	5.1	3.2	2.7	3.0	2.6	2.9	4.4	2.2	1.1	0.60	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

MEAN	4.22	4.64	3.90	4.18	16.0	9.63	6.75	9.84	21.0	10.0	4.86	3.95
MAX	7.15	6.13	5.68	4.63	37.3	20.1	13.2	17.7	52.5	23.8	6.65	10.7
(WY)	2002	2002	2002	2001	2001	2001	2001	2001	2001	2001	2001	2001
MIN	1.29	3.14	2.12	3.72	3.89	3.62	2.54	3.11	4.17	2.17	3.51	0.45
(WY)	2001	2001	2001	2002	2002	2002	2000	2000	2002	2002	2002	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2000 - 2002

ANNUAL MEAN	16.9	4.51	10.2
HIGHEST ANNUAL MEAN			15.9
LOWEST ANNUAL MEAN			4.51
HIGHEST DAILY MEAN			423
LOWEST DAILY MEAN	0.80	Feb 24	0.09
ANNUAL SEVEN-DAY MINIMUM	0.93	Jan 4	0.19
MAXIMUM PEAK FLOW	---	Jan 1	633
MAXIMUM PEAK STAGE	---		13.41
INSTANTANEOUS LOW FLOW	---		0.07
10 PERCENT EXCEEDS	29		21
50 PERCENT EXCEEDS	9.4		5.1
90 PERCENT EXCEEDS	4.4		1.2

e Estimated

a Minimum recorded, may have been less during periods of estimated record.

## MISSOURI RIVER BASIN

06815575 SQUAW CREEK NEAR MOUND CITY, MO

LOCATION.--Lat 40°09'21" long 95°15'52", in SE ¼ SW ¼ NE ¼ sec.26, T.62 N., R.39 W., Holt County, Hydrologic Unit 10240005, on right bank of downstream side of State Highway 59 bridge, 2.4 mi northwest of Mound City.

DRAINAGE AREA.--62.7 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	16	14	e6.8	e22	e9.0	8.6	15	18	9.6	3.9	2.1
2	12	16	14	e6.5	e19	e8.0	8.2	15	17	9.3	3.6	2.0
3	12	15	14	e6.5	e19	e7.0	7.9	14	16	9.4	3.5	1.6
4	18	15	14	e6.8	e18	e6.5	7.9	14	16	12	3.6	1.7
5	44	15	14	e7.5	e17	e11	7.9	14	16	10	3.4	1.6
6	17	16	13	e8.0	e15	11	8.1	159	15	9.5	3.4	1.5
7	15	15	13	e7.5	11	9.8	8.2	40	15	9.2	3.5	1.4
8	15	15	13	e7.0	11	9.9	9.5	29	15	9.1	3.0	1.2
9	14	15	13	e8.5	13	12	11	25	14	8.8	3.1	1.2
10	16	15	13	12	13	10	8.9	21	15	8.5	3.1	1.3
11	14	14	13	e12	e12	9.8	28	95	16	8.7	3.2	1.6
12	14	15	14	11	12	9.5	25	201	19	17	3.4	1.4
13	51	15	14	11	11	9.2	15	49	15	9.3	5.4	1.5
14	23	15	13	11	11	9.1	14	38	14	8.6	3.9	2.0
15	36	14	13	11	10	8.7	14	33	14	8.4	3.5	2.2
16	30	14	12	10	9.9	8.5	14	e31	14	8.3	3.7	1.7
17	23	14	13	e9.5	9.7	8.6	13	e29	13	8.1	3.9	1.4
18	21	14	12	e9.0	10	8.4	13	26	13	8.0	3.6	2.0
19	20	13	12	10	12	8.8	12	25	13	7.7	3.6	2.2
20	19	13	12	e9.5	12	9.0	12	24	12	7.6	22	2.4
21	18	14	12	11	10	7.9	16	22	12	7.4	5.2	1.9
22	20	13	12	10	9.7	7.9	14	22	12	6.8	4.1	1.4
23	20	13	12	10	9.8	8.2	14	23	11	6.9	5.2	1.2
24	18	27	e11	10	9.6	8.4	13	23	11	6.8	3.4	1.4
25	17	21	e10	e9.5	9.2	8.8	13	35	11	7.7	2.9	1.3
26	16	16	e9.0	9.7	e8.5	8.7	12	23	11	12	2.7	2.0
27	16	14	e9.0	9.7	e8.0	9.1	20	24	11	25	2.6	1.7
28	17	14	e9.5	9.4	e9.0	8.8	19	21	10	4.8	2.4	1.8
29	16	14	e9.8	8.8	---	9.8	16	20	10	4.5	2.3	1.7
30	17	14	e8.0	e9.0	---	9.4	15	19	9.8	4.3	2.2	1.4
31	18	---	e7.0	e15	---	8.7	---	18	---	4.1	2.2	---
MEAN	20.0	15.1	12.0	9.46	12.2	9.02	13.3	37.0	13.6	8.95	4.05	1.66
MAX	51	27	14	15	22	12	28	201	19	25	22	2.4
MIN	12	13	7.0	6.5	8.0	6.5	7.9	14	9.8	4.1	2.2	1.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

MEAN	11.5	10.5	7.35	8.76	46.8	35.5	25.5	37.4	66.5	24.7	9.80	12.4
MAX	20.0	15.1	12.0	9.46	81.4	62.0	37.7	37.8	119	40.5	15.5	23.1
(WY)	2002	2002	2002	2002	2001	2001	2001	2001	2001	2001	2001	2001
MIN	3.02	5.93	2.68	8.06	12.2	9.02	13.3	37.0	13.6	8.95	4.05	1.66
(WY)	2001	2001	2001	2001	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 2001 - 2002		
ANNUAL MEAN	38.9			13.1			24.5		
HIGHEST ANNUAL MEAN							36.0		
LOWEST ANNUAL MEAN							13.1		
HIGHEST DAILY MEAN	781			201			781		
LOWEST DAILY MEAN	1.2			1.2			1.2		
ANNUAL SEVEN-DAY MINIMUM	2.0			1.4			1.4		
MAXIMUM PEAK FLOW	---			590			2630		
MAXIMUM PEAK STAGE	---			12.96			20.06		
INSTANTANEOUS LOW FLOW	---			0.93			0.93		
10 PERCENT EXCEEDS	68			21			46		
50 PERCENT EXCEEDS	24			11			13		
90 PERCENT EXCEEDS	9.9			2.8			2.7		

e Estimated

## NODAWAY RIVER BASIN

93

06817700 NODAWAY RIVER NEAR GRAHAM, MO

LOCATION.--Lat 40°12'08", long 95°04'07", in NE ¼ NE ¼ NE ¼ sec.9, T.62 N., R.37 W., Holt County, Hydrologic Unit 10240010, at right downstream end of bridge on Highway A, 0.15 mi east of Maitland, and 1.5 mi west of Graham.

DRAINAGE AREA.--1,380 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1982 to current year.

REVISED RECORDS.--WDR MO-94-1: 1993 peak, September monthly and yearly mean discharge.

GAGE.--Water-stage recorder. Datum of gage is 852.09 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e68	99	125	e52	e58	e100	104	368	372	e156	e105	39
2	e65	93	125	e48	e58	e90	100	300	328	e148	e98	34
3	e62	87	120	e48	e55	e73	88	282	292	e137	e94	30
4	e65	84	118	e48	e57	e76	83	257	274	e125	e90	28
5	121	81	115	e49	e58	e90	80	230	261	e115	e83	26
6	120	80	118	e50	e58	e110	79	494	248	e108	e79	23
7	108	78	115	e50	e70	153	80	794	232	e100	e74	23
8	100	74	105	e47	e73	161	91	366	211	e94	e72	30
9	82	72	98	e50	e85	188	109	294	194	e85	e70	29
10	72	77	98	e58	127	230	101	256	182	e79	e72	28
11	84	75	98	e70	136	217	102	473	186	e77	e76	27
12	90	76	110	100	190	216	112	4640	347	e83	e77	27
13	140	82	120	122	213	203	132	3290	1230	e540	e96	25
14	230	82	125	126	198	188	174	1660	1260	363	e98	28
15	266	81	125	136	209	174	180	1140	941	261	e190	34
16	198	83	120	134	231	169	159	961	618	192	e151	33
17	144	83	115	140	211	152	120	836	446	156	e120	32
18	115	82	110	154	196	141	105	742	388	133	e110	32
19	102	80	103	104	209	132	98	663	345	122	e112	36
20	95	79	98	114	240	124	91	610	321	112	e190	69
21	91	76	96	129	229	116	110	574	305	111	320	86
22	94	76	96	124	202	101	126	525	282	109	168	69
23	101	80	92	114	188	96	118	564	286	102	178	61
24	96	130	90	87	170	105	114	830	232	e77	165	56
25	119	211	e80	90	149	111	215	747	223	e68	150	52
26	143	218	e70	120	118	100	150	780	219	e68	107	46
27	103	194	e74	123	e115	124	167	609	204	e79	84	45
28	93	165	e76	134	e100	121	282	512	198	e87	73	52
29	90	145	e64	e84	---	134	348	494	e184	e100	63	55
30	93	135	e56	e65	---	130	465	429	e165	e145	52	54
31	101	---	e56	e48	---	114	---	408	---	e115	43	---
MEAN	111	102	100	90.9	143	137	143	811	366	137	112	40.3
MAX	266	218	125	154	240	230	465	4640	1260	540	320	86
MIN	62	72	56	47	55	73	79	230	165	68	43	23
IN.	0.09	0.08	0.08	0.08	0.11	0.11	0.12	0.68	0.30	0.11	0.09	0.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1983 - 2002, BY WATER YEAR (WY)

MEAN	395	472	492	342	752	1068	1469	1942	1743	1524	537	647
MAX	2313	1735	2026	1199	1839	3155	3614	4606	4936	12460	2758	3364
(WY)	1987	1993	1993	1983	1983	1998	1984	1995	1984	1993	1987	1993
MIN	46.2	77.1	63.9	57.8	82.2	128	58.8	48.6	68.5	75.1	46.2	40.3
(WY)	2001	1989	2001	2000	1989	2000	1989	1989	1988	1988	1988	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1983 - 2002	
ANNUAL MEAN	966		191		932	
HIGHEST ANNUAL MEAN					2870	
LOWEST ANNUAL MEAN					186	
HIGHEST DAILY MEAN	11300		Feb 25		52000	
LOWEST DAILY MEAN	50		Jan 3,4		23	
ANNUAL SEVEN-DAY MINIMUM	57		Jan 1		27	
MAXIMUM PEAK FLOW	---		May 12		78300	
MAXIMUM PEAK STAGE	---		May 12		26.16	
INSTANTANEOUS LOW FLOW	---		Sep 7		20	
ANNUAL RUNOFF (INCHES)	9.50		1.89		9.18	
10 PERCENT EXCEEDS	2660		347		2200	
50 PERCENT EXCEEDS	248		111		350	
90 PERCENT EXCEEDS	80		55		69	

e Estimated

## NODAWAY RIVER BASIN

06817700 NODAWAY RIVER NEAR GRAHAM, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1989 to October 1989, November 1992 to current year.

REMARKS.--This site replaced Nodaway River near Oregon, Missouri (06817800).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)
NOV 14...	1100	ENVIRONMENTAL	85	10.2	103	8.4	431	14.5	200	56.4	14.9	3.36
MAR 05...	1330	ENVIRONMENTAL	e90	14.4	104	8.0	502	1.0	--	--	--	--
APR 22...	1330	ENVIRONMENTAL	127	15.4	153	8.9	408	14.0	--	--	--	--
MAY 14...	1230	ENVIRONMENTAL	1620	10.1	104	7.8	336	15.5	140	40.6	9.47	5.16
JUN 10...	1250	ENVIRONMENTAL	184	13.2	165	9.3	304	24.5	--	--	--	--
JUL 09...	1150	ENVIRONMENTAL	83	9.4	133	8.8	345	32.0	150	34.0	15.4	3.16

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
NOV 14...	11.9	178	178	213	2	12.0	.3	33.7	28	246	<.04	.38	.07
MAR 05...	--	208	209	255	0	--	--	--	<10	--	.10	.40	1.81
APR 22...	--	174	174	186	13	--	--	--	39	--	<.04	.96	<.05
MAY 14...	6.60	98	98	119	0	8.60	.3	19.0	1990	235	.32	4.8	11.3
JUN 10...	--	109	108	95	18	--	--	--	83	--	<.04	2.1	1.66
JUL 09...	10.8	137	137	145	11	11.9	.4	28.2	94	207	<.04	1.3	<.05

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHOS- DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
NOV 14...	E.004	<.06	E.01	.07	<1	53	160	4	235	1.3	E.02	<.1	<6
MAR 05...	.019	E.04	.04	.08	<1	K3	K14	--	--	--	--	--	--
APR 22...	<.008	E.05	.03	.17	K40	120	93	--	--	--	--	--	--
MAY 14...	.123	.10	.08	1.73	K33000	K37000	K16000	2	14100	1.6	<.04	1.2	<6
JUN 10...	.066	<.06	<.02	.24	K20	97	80	--	--	--	--	--	--
JUL 09...	<.008	.11	.09	.38	<3	73	180	2	902	5.7	.05	E.1	<6

06817700 NODAWAY RIVER NEAR GRAHAM, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)
NOV 14...	21	E.05	M	307	<.01	.5	<1	2	<.002	<.004	<.002	<.005	.069
MAR 05...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	.054
APR 22...	--	--	--	--	--	--	--	--	<.006	.283	.011	<.005	.827
MAY 14...	<10	<.08	30	E1.7	.06	1.8	<1	94	<.006	.784	.025	<.005	15.1
JUN 10...	--	--	--	--	--	--	--	--	<.006	.036	<.004	<.005	1.55
JUL 09...	E5	.10	2	3.3	E.01	1.1	5	10	<.006	.015	<.004	<.005	.929
DATE	BEN- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)
NOV 14...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.022	<.005	<.005	<.02	<.002	<.009
MAR 05...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.019	<.005	<.005	<.02	.003	<.009
APR 22...	<.010	<.002	<.041	<.020	<.005	E.008	<.003	E.047	<.005	<.005	<.02	<.002	<.009
MAY 14...	<.010	<.002	<.041	E.024	<.005	.019	<.003	E.476	<.005	<.005	<.02	<.002	<.009
JUN 10...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.153	<.005	<.005	<.02	<.002	<.009
JUL 09...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.111	<.005	<.005	<.02	<.002	<.009
DATE	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)
NOV 14...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.022	<.006	<.002	<.007	<.003	<.007
MAR 05...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.022	<.006	<.002	<.007	<.003	<.010
APR 22...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.150	<.006	<.002	<.007	<.003	<.010
MAY 14...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	3.12	.054	<.002	<.007	<.003	<.010
JUN 10...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.126	<.006	<.002	<.007	<.003	<.010
JUL 09...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.061	<.006	<.002	<.007	<.003	<.010

## NODAWAY RIVER BASIN

06817700 NODAWAY RIVER NEAR GRAHAM, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
NOV 14...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
MAR 05...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
APR 22...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.010	<.02	<.034	<.02
MAY 14...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.039	<.02	<.034	<.02
JUN 10...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUL 09...	<.004	<.022	<.006	<.011	.02	<.004	<.010	<.011	<.02	.010	<.02	<.034	<.02

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
NOV 14...	<.005	<.002	<.009
MAR 05...	<.005	<.002	<.009
APR 22...	<.005	<.002	<.009
MAY 14...	<.005	<.002	E.005
JUN 10...	<.005	<.002	<.009
JUL 09...	<.005	<.002	<.009

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06818000 MISSOURI RIVER AT ST. JOSEPH, MO

LOCATION.--Lat 39°45'12", long 94°51'28", in NW ¼ SW ¼ sec.17, T.57 N., R.35 W., Buchanan County, Hydrologic Unit 10240011, on left bank at left abutment of St. Joseph and Grand Island Railroad Bridge in St. Joseph, and at mile 448.2.

DRAINAGE AREA.--420,100 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Gage-height records collected in vicinity 1873-99 are contained in reports of the Missouri River Commission; since 1900 in reports of the National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 788.19 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 21, 1931 nonrecording gage and from Oct. 21, 1931, to Dec. 31, 1933, water-stage recorder, both at same site at datum 5.50 ft higher.

REMARKS.--Water-discharge records good. Some regulation from many upstream reservoirs. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 397,000 ft<sup>3</sup>/s, Apr. 22, 1952; maximum gage-height, 32.07 ft; July 26, 1993; minimum discharge, 2,300 ft<sup>3</sup>/s, Jan. 9, 1937.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Apr. 29, 1881, reached a stage of 27.2 ft, present datum, discharge, about 370,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers. Flood of June 1844 reached a stage of 24.5 ft, discharge, about 350,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35700	36300	35800	20800	23700	23800	33200	36100	39000	33300	29700	37300
2	35500	36800	34000	20300	22500	22300	33600	35500	37800	32700	29500	36200
3	35400	36800	32200	20100	20600	21700	34300	34700	36300	32500	29300	35700
4	35500	37200	30900	20000	20400	21700	35100	34600	36100	32200	29000	35800
5	35800	37200	29400	20100	21000	20700	35200	34900	36100	32300	29000	35700
6	35900	37100	28700	20300	21000	19900	34400	38300	35900	32000	29500	35400
7	35600	37200	28500	20600	21200	21000	33700	42500	35500	31900	30300	35200
8	35400	36800	28500	21300	21800	22400	33100	37700	35000	31700	32900	35000
9	35200	37000	28700	22900	22800	23800	33000	36400	34300	31600	33100	35100
10	35700	36900	28000	23100	24600	23500	33400	35100	34000	31600	31600	34900
11	37000	36900	27600	22200	25600	23100	33400	38900	35600	31500	31000	34800
12	37300	36900	27300	23200	25900	23100	34200	43600	38600	32300	30800	34900
13	37300	36700	27200	24600	26100	23500	35100	50400	43400	32900	30800	35100
14	39700	36700	26500	25600	26400	24100	34600	47700	56500	33900	32300	35100
15	39400	36600	26000	26100	26800	26800	34300	42200	50800	32500	32200	35500
16	38600	36900	26100	26800	26900	33200	33700	39900	43100	31700	31000	35500
17	37300	36500	25800	26300	26200	33900	33900	39200	40800	31500	31500	35800
18	36900	37100	25400	25400	26600	29900	34100	38100	39800	30900	31800	34800
19	37100	37500	25300	24600	26800	27500	34000	37000	38600	30600	33800	34200
20	37300	37600	25400	24800	26900	26800	34500	36800	37600	30300	37700	34000
21	37300	37300	25000	25000	27200	26700	35300	35800	36900	30100	40100	34300
22	37200	36900	25100	24300	26900	27100	34600	35400	36200	29800	38200	34100
23	37100	36800	24700	23700	26200	29100	34200	35400	35900	29600	40000	33000
24	38500	37400	24000	23900	25600	31400	34100	37000	36200	29700	56200	32100
25	37800	38500	24200	23800	25100	32700	34100	38100	35200	29900	47800	31400
26	37600	39500	23800	23800	25000	34600	33600	39600	34600	30200	44000	31100
27	37500	40700	22500	24300	25000	33600	33700	39000	36500	30700	41700	31600
28	37000	39700	21400	25200	25000	32300	35000	38000	33700	32000	39100	33000
29	37200	37800	20900	26200	---	33000	35500	38700	33800	32400	37800	34000
30	37000	37200	20500	26100	---	33400	35600	40400	33700	30700	36900	34400
31	36300	---	20700	24800	---	32900	---	39300	---	29800	37500	---
MEAN	36910	37350	26450	23550	24640	27080	34220	38590	37920	31450	35040	34500
MAX	39700	40700	35800	26800	27200	34600	35600	50400	56500	33900	56200	37300
MIN	35200	36300	20500	20000	20400	19900	33000	34600	33700	29600	29000	31100
IN.	0.10	0.10	0.07	0.06	0.06	0.07	0.09	0.11	0.10	0.09	0.10	0.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	48300	45340	30980	25660	32230	45950	56970	58930	62600	57310	48910	49480
MAX	87650	85040	61820	45740	60570	96800	113600	106600	144700	195400	83050	79160
(WY)	1987	1998	1987	1973	1983	1979	1984	1997	1984	1993	1996	1997
MIN	30290	18510	11560	12210	15790	19490	32920	36390	35620	34230	33520	34260
(WY)	1962	1991	1964	1959	1964	1964	1990	1958	1958	1963	1991	1963

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002 <sup>a</sup>
ANNUAL MEAN	43230	32330	47070
HIGHEST ANNUAL MEAN			76050
LOWEST ANNUAL MEAN			30960
HIGHEST DAILY MEAN	126000	May 6	328000
LOWEST DAILY MEAN	20500	Dec 30	4000
ANNUAL SEVEN-DAY MINIMUM	22000	Jan 22	5030
MAXIMUM PEAK FLOW	---		61000
MAXIMUM PEAK STAGE	---		13.18
INSTANTANEOUS LOW FLOW	---		19800
ANNUAL RUNOFF (INCHES)	1.40		1.04
10 PERCENT EXCEEDS	69300		38500
50 PERCENT EXCEEDS	37500		33700
90 PERCENT EXCEEDS	23700		23600

<sup>a</sup> Post-regulation period.

## MISSOURI RIVER MAIN STEM

06818000 MISSOURI RIVER AT ST. JOSEPH, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1969 to July 1992, November 1992 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1984 to December 1984, July 1985 to September 1985, April 1986 to September 1986.

DISSOLVED OXYGEN: May 1984 to November 1984, July 1985 to September 1985, April 1986 to September 1986.

INSTRUMENTATION.--Water-quality monitor, May 1984 to December 1984, July 1985 to September 1985, April 1986 to September 1986.

REMARKS.--National Stream-Quality Accounting Network station October 1974 to September 1986. Ambient Water-Quality Monitoring Network station October 1969 to July 1992, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT												
18...	1045	ENVIRONMENTAL	36800	9.4	93	8.4	790	13.5	--	--	--	--
NOV												
16...	1030	ENVIRONMENTAL	37000	9.7	96	8.4	785	14.0	260	62.3	24.5	6.16
16...	1035	BLANK	--	--	--	--	--	--	--	E.01	<.008	<.10
DEC												
19...	1035	ENVIRONMENTAL	25300	11.3	90	8.4	780	5.0	--	--	--	--
JAN												
24...	1125	ENVIRONMENTAL	23900	11.7	88	8.4	785	2.6	290	74.3	25.5	5.94
FEB												
21...	1050	ENVIRONMENTAL	27300	10.7	88	8.4	709	6.0	--	--	--	--
21...	1051	REPLICATE	--	--	--	--	--	--	--	--	--	--
MAR												
07...	1045	ENVIRONMENTAL	20900	12.5	95	8.3	755	2.5	--	--	--	--
APR												
24...	1040	ENVIRONMENTAL	34000	9.4	97	8.5	752	15.5	--	--	--	--
MAY												
16...	1135	ENVIRONMENTAL	39900	8.4	89	8.1	656	16.5	240	60.7	20.8	5.97
JUN												
12...	1050	ENVIRONMENTAL	39300	5.9	74	8.3	703	25.0	--	--	--	--
JUL												
11...	1100	ENVIRONMENTAL	31500	6.8	93	8.4	803	30.0	250	59.8	23.5	5.73
AUG												
14...	1020	ENVIRONMENTAL	32000	6.7	86	8.4	782	26.0	--	--	--	--
SEP												
26...	1215	ENVIRONMENTAL	31000	9.2	105	8.6	756	20.0	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT													
18...	--	182	184	225	0	--	--	--	99	--	<.04	.89	.62
NOV													
16...	69.4	176	176	207	4	20.0	.5	198	50	548	<.04	.59	.48
16...	<.09	--	--	--	--	<.30	<.1	<.1	--	10	--	--	--
DEC													
19...	--	225	226	268	4	--	--	--	66	--	E.03	.73	1.81
JAN													
24...	63.7	217	214	254	4	25.9	.5	170	38	520	.09	.57	1.59
FEB													
21...	--	194	191	228	3	--	--	--	90	--	.10	1.0	1.52
21...	--	--	--	--	--	--	--	--	90	--	.09	.96	1.59
MAR													
07...	--	205	203	247	0	--	--	--	44	--	.08	.43	1.40
APR													
24...	--	186	187	215	7	--	--	--	252	--	<.04	1.2	.57
MAY													
16...	45.5	176	176	215	0	15.2	.4	136	540	440	E.03	2.4	2.77
JUN													
12...	--	172	171	203	3	--	--	--	624	--	E.04	2.4	1.11
JUL													
11...	75.5	169	170	202	3	25.0	.5	197	129	500	<.04	.95	.32
AUG													
14...	--	177	176	206	4	--	--	--	80	--	<.04	.92	.11
SEP													
26...	--	181	180	216	2	--	--	--	68	--	<.04	.99	.12



06818000 MISSOURI RIVER AT ST. JOSEPH, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 18...	E.007	.07	.06	.23	760	K1700	280	--	--	--	--	--	--
NOV 16...	<.008	E.05	.04	.15	K1300	K1300	58	1	569	2.5	E.02	<.1	<6
16...	--	--	--	--	--	--	--	<1	4	<.2	<.04	<.1	<6
DEC 19...	.009	.11	.08	.21	320	310	130	--	--	--	--	--	--
JAN 24...	.008	.08	.08	.15	320	170	110	4	462	3.2	<.04	<.1	<6
FEB 21...	.009	.10	.07	.30	370	350	90	--	--	--	--	--	--
21...	.011	.11	.08	.27	--	--	--	--	--	--	--	--	--
MAR 07...	.009	.07	.07	.15	K52	100	87	--	--	--	--	--	--
APR 24...	E.007	.06	.05	.38	72	1200	780	--	--	--	--	--	--
MAY 16...	.049	.10	.10	.69	<10	1400	600	2	5780	3.0	E.03	.3	<6
JUN 12...	.013	.07	.06	.78	<10	770	K14000	--	--	--	--	--	--
JUL 11...	E.007	E.04	.04	.16	K20	97	52	2	612	3.2	E.04	E.1	<6
AUG 14...	E.004	E.04	.04	.18	K140	120	100	--	--	--	--	--	--
SEP 26...	E.007	E.04	.03	.16	K14	49	K21	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 18...	--	--	--	--	--	--	--	--
NOV 16...	<10	<.08	1	E1.4	<.01	2.2	4	6
16...	<10	<.08	<1	<2.0	<.01	<.3	2	1
DEC 19...	--	--	--	--	--	--	--	--
JAN 24...	<10	<.08	1	7.5	<.01	3.3	2	6
FEB 21...	--	--	--	--	--	--	--	--
21...	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--
APR 24...	--	--	--	--	--	--	--	--
MAY 16...	<10	E.05	10	<2.0	.03	2.9	2	45
JUN 12...	--	--	--	--	--	--	--	--
JUL 11...	<10	E.06	1	<2.0	<.01	2.9	1	7
AUG 14...	--	--	--	--	--	--	--	--
SEP 26...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## PLATTE RIVER BASIN

06819500 ONE HUNDRED AND TWO RIVER AT MARYVILLE, MO

LOCATION.--Lat 40°20'45", long 94°49'56", in SW ¼ SW ¼ sec.15, T.64 N., R.35 W., Nodaway County, Hydrologic Unit 10240013, on right bank 150 ft upstream from bridge on U.S. Highway 136, 0.3 mi downstream from Thill Branch, 1 mi east of Maryville, and at mile 64.0.

DRAINAGE AREA.--515 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1932 to September 1990, March 22, 2001 to current year. April to June 1934 monthly discharge only published in WSP 1310. June 1934 to September 1971 published as "near Maryville".

GAGE.--Water-stage recorder. Datum of gage is 954.65 ft above National Geodetic Vertical Datum of 1929. Nonrecording gage prior to Sept. 15, 1958. Prior to June 20, 1934, at site 20 ft upstream and datum 10 ft higher. June 20, 1934 to July 19, 1971, at site 3 mi upstream at datum 15.68 ft higher. July 20, 1971 to September 1990, at site 20 ft upstream and datum 10 ft higher.

REMARKS.--Records good except for discharges above 5,000 ft<sup>3</sup>/s and estimated daily discharges, which are poor. Some regulation at low flow by City Waterworks. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of September 16, 1926 reached a stage of 25 ft, present datum from floodmark; discharge, 14,500 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	26	21	e7.8	e5.0	e11	39	95	94	15	7.1	3.9
2	10	18	20	e7.4	e5.8	e11	34	79	82	14	5.8	3.5
3	9.9	16	19	e7.0	e5.8	e10	29	67	74	14	5.6	3.4
4	21	15	19	e7.0	e6.0	e9.0	27	55	72	21	5.1	e2.9
5	46	13	22	e8.0	e6.6	e12	24	46	67	19	5.0	e2.9
6	26	14	20	e9.0	e6.6	25	21	533	62	20	5.0	e2.8
7	18	13	23	10	e7.2	32	24	475	54	15	5.5	e2.7
8	16	12	20	11	e12	34	34	181	49	13	5.0	e2.7
9	13	11	18	12	e17	54	39	167	44	12	4.7	e2.6
10	14	11	17	15	24	92	37	126	42	11	4.9	e2.7
11	12	11	17	18	26	84	35	2040	47	13	4.9	e2.7
12	10	11	26	19	47	64	41	2250	81	51	4.5	2.8
13	22	11	34	19	45	51	44	579	132	45	13	3.1
14	60	12	35	21	45	46	45	311	69	19	9.9	3.7
15	48	13	30	17	54	40	38	213	47	14	6.6	4.1
16	36	12	28	19	44	35	33	e175	39	12	5.6	4.3
17	20	12	25	14	38	30	30	200	36	10	11	4.3
18	15	12	23	14	38	26	28	159	33	9.8	14	3.8
19	13	12	21	15	50	26	28	129	31	9.3	10	5.6
20	12	11	18	12	58	28	26	114	29	8.7	57	13
21	10	12	18	14	62	27	35	101	28	8.0	12	20
22	13	13	22	14	46	20	48	94	24	7.4	12	12
23	54	14	14	17	36	24	46	146	22	7.0	32	7.9
24	32	37	10	12	32	23	62	414	21	6.4	38	4.8
25	19	131	e9.5	14	27	24	108	292	20	7.7	21	4.7
26	15	78	e9.0	17	13	24	51	325	19	16	13	5.3
27	13	46	e10	20	e11	31	81	186	33	27	9.2	3.5
28	12	33	e10	16	e10	36	197	148	24	49	7.3	3.6
29	12	27	e9.0	8.6	---	61	173	234	19	18	5.9	3.4
30	14	23	e8.2	6.2	---	66	116	134	17	11	5.1	2.8
31	31	---	e8.0	e5.5	---	51	---	110	---	8.4	4.7	---
MEAN	21.2	22.7	18.8	13.1	27.8	35.7	52.4	328	47.0	16.5	11.3	4.85
MAX	60	131	35	21	62	92	197	2250	132	51	57	20
MIN	9.9	11	8.0	5.5	5.0	9.0	21	46	17	6.4	4.5	2.6
IN.	0.05	0.05	0.04	0.03	0.06	0.08	0.11	0.74	0.10	0.04	0.03	0.01

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	147	118	81.0	102	230	413	335	415	486	218	132	166
MAX	1897	945	818	1186	1240	1874	1655	2242	3187	1452	992	1312
(WY)	1974	1942	1983	1960	1973	1979	1984	1982	1947	1986	1982	1977
MIN	0.05	0.59	1.12	0.11	2.09	3.42	0.74	0.11	5.18	0.50	0.18	0.03
(WY)	1989	1989	1989	1977	1989	1954	1956	1989	1988	1989	1988	1988

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	50.4	238
HIGHEST ANNUAL MEAN		658
LOWEST ANNUAL MEAN		18.6
HIGHEST DAILY MEAN	2250	25500
LOWEST DAILY MEAN	2.6	0.00
ANNUAL SEVEN-DAY MINIMUM	2.7	0.00
MAXIMUM PEAK FLOW	6540	28000
MAXIMUM PEAK STAGE	13.43	19.25 <sup>a</sup>
INSTANTANEOUS LOW FLOW	2.5	0.00
ANNUAL RUNOFF (INCHES)	1.33	6.27
10 PERCENT EXCEEDS	83	470
50 PERCENT EXCEEDS	19	30
90 PERCENT EXCEEDS	5.4	2.6

e Estimated

a Former Datum.

06820500 PLATTE RIVER NEAR AGENCY, MO

LOCATION.--Lat 39°41'20", long 94°42'15", in NE ¼ NW ¼ sec.10, T.56 N., R.34 W., Buchanan County, Hydrologic Unit 10240012, on left bank 10 ft downstream from bridge of U.S. Highway 169, 1.5 mi downstream from Third Fork, 3.5 mi northeast of Agency, and at mile 66.8.

DRAINAGE AREA.--1,760 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1924 to August 1930, published as "at Agency"; May 1932 to current year.

GAGE.--Water-stage recorder. Datum of gage is 807.38 ft above National Geodetic Vertical Datum of 1929. May 22, 1924, to Aug. 9, 1930, nonrecording gage at site 4 mi downstream at different datum; May 13, 1932, to Nov. 14, 1965, nonrecording gage at same site and datum; Nov. 15, 1965, to Oct. 25, 1989, water-stage recorder at site 150 ft upstream at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	198	149	142	e50	e130	e160	e257	543	461	114	52	38
2	176	151	132	e50	e128	e140	e231	448	403	106	44	35
3	165	173	127	e56	e112	e140	e195	398	357	96	39	31
4	135	153	125	e54	e110	e155	e172	366	333	104	34	34
5	143	163	123	e56	e112	e175	e159	317	320	229	33	27
6	153	147	120	e58	e120	e185	e151	2990	304	118	32	25
7	227	146	120	e58	e130	e213	e162	3380	283	104	32	23
8	189	146	119	e60	156	e244	e211	1730	264	95	30	22
9	170	141	113	e75	190	459	378	995	247	90	29	19
10	180	124	109	e82	227	472	331	678	234	90	30	19
11	195	137	108	e90	198	e382	259	5810	248	90	34	18
12	164	148	124	e115	213	e387	263	12300	2320	276	40	17
13	161	140	142	e125	211	e394	439	6970	802	151	40	17
14	147	126	132	134	216	e342	334	2160	483	89	40	18
15	309	117	133	141	226	e326	277	1320	429	139	43	20
16	625	109	138	147	229	e251	257	987	295	121	43	19
17	353	108	124	133	232	e197	233	825	238	86	46	19
18	231	105	120	125	229	e182	210	747	266	72	47	20
19	195	108	114	186	e218	e174	203	738	223	64	49	34
20	199	105	102	145	e220	e161	216	623	180	62	117	30
21	162	118	95	140	e225	e156	570	548	165	76	174	26
22	146	117	99	127	e238	e148	667	499	155	60	242	24
23	170	105	91	133	e250	e146	387	477	144	52	127	57
24	204	185	79	133	236	e150	316	497	135	47	115	62
25	267	194	e65	124	221	e154	280	1150	126	44	154	49
26	229	215	e68	130	186	e165	274	864	124	57	99	40
27	208	249	e68	134	e175	e174	412	1000	296	58	82	33
28	172	197	e64	138	e155	e185	1320	750	247	50	69	30
29	154	162	e72	135	---	e197	736	600	174	59	59	28
30	153	149	e65	e130	---	364	649	712	136	73	50	27
31	153	---	e55	e130	---	311	---	574	---	66	42	---
MEAN	204	146	106	110	189	235	352	1677	346	94.8	66.7	28.7
MAX	625	249	142	186	250	472	1320	12300	2320	276	242	62
MIN	135	105	55	50	110	140	151	317	124	44	29	17
IN.	0.13	0.09	0.07	0.07	0.11	0.15	0.22	1.10	0.22	0.06	0.04	0.02

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	645	556	375	376	842	1360	1509	1667	2015	1180	446	878
MAX	8584	4620	3248	3714	4912	6345	6835	10020	13640	21280	2935	7853
(WY)	1974	1962	1983	1974	1973	1979	1973	1995	1947	1993	1987	1926
MIN	0.02	6.14	5.59	2.72	14.0	12.7	9.89	26.9	41.7	10.2	2.62	6.76
(WY)	1957	1956	1939	1940	1940	1938	1956	1956	1988	1936	1934	1955

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	1454		298		987	
HIGHEST ANNUAL MEAN					4108	
LOWEST ANNUAL MEAN					67.4	
HIGHEST DAILY MEAN	16600		12300		57500	
LOWEST DAILY MEAN	36		17		0.00	
ANNUAL SEVEN-DAY MINIMUM	39		18		0.00	
MAXIMUM PEAK FLOW	---		13000		60800	
MAXIMUM PEAK STAGE	---		23.17		36.07	
INSTANTANEOUS LOW FLOW	---		17		0.00	
ANNUAL RUNOFF (INCHES)	11.22		2.30		7.62	
10 PERCENT EXCEEDS	3790		474		2130	
50 PERCENT EXCEEDS	460		147		198	
90 PERCENT EXCEEDS	114		40		24	

e Estimated

## PLATTE RIVER BASIN

06821080 LITTLE PLATTE RIVER NEAR PLATTSBURG, MO

LOCATION.--Lat 39°34'04", long 94°24'24", in SE ¼ NW ¼ sec.20, T.55 N., R.31 W., Clinton County, Hydrologic Unit 10240012, on U.S. Highway 116 bridge, 0.4 mi east of the junction with U.S. Highway 33, and 2.5 mi east of Osborn.

DRAINAGE AREA.--65.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Oct. 1, 1999 to Sept. 30, 2000, Oct. 1, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage unknown.

REMARKS.--Records fair except for period July 21 to Aug. 31 and estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	6.8	3.5	4.8	e0.40	e1.0	e2.0	9.9	12	5.2	0.44	0.54	0.00
2	5.9	3.2	4.7	e0.32	e1.2	e1.0	10	10	4.6	0.42	0.22	0.00
3	7.0	2.9	4.7	e0.25	e1.4	e0.90	11	8.2	4.0	0.42	0.14	0.00
4	7.5	3.3	4.7	e0.25	e1.5	e0.80	10	7.1	3.8	0.39	0.12	0.00
5	23	3.7	5.3	e0.40	e1.4	e1.3	9.8	6.5	4.0	0.35	0.10	0.00
6	13	3.8	5.2	e0.45	e1.7	e3.0	10	1160	3.9	0.23	0.06	0.00
7	7.5	3.7	4.9	e0.80	2.5	8.8	11	140	3.4	0.15	0.02	0.00
8	6.3	3.5	4.7	e0.80	5.0	9.3	21	37	3.0	0.12	0.00	0.00
9	6.4	3.2	4.2	e1.2	19	20	75	27	2.8	0.10	0.00	0.00
10	11	3.1	4.1	2.1	18	13	23	15	2.7	0.12	0.00	0.00
11	19	3.1	4.0	2.1	9.3	9.0	13	733	3.6	0.11	0.00	0.00
12	10	3.1	5.0	2.2	6.4	7.4	9.7	961	23	0.10	0.00	0.00
13	7.8	3.1	9.1	2.1	4.2	6.6	7.8	197	11	0.09	0.00	0.00
14	8.9	4.1	7.9	2.1	3.6	6.2	6.8	51	4.7	0.05	0.00	0.00
15	229	4.8	4.6	1.9	3.1	5.7	6.5	29	2.9	0.05	0.00	0.00
16	134	4.8	3.4	1.7	2.9	5.2	6.1	22	2.2	0.02	0.00	0.00
17	16	4.8	2.8	1.5	2.6	4.8	5.6	17	1.6	0.02	0.00	0.00
18	5.1	5.1	2.6	1.4	2.4	5.0	5.2	14	2.4	0.04	0.04	0.00
19	2.3	6.2	2.4	1.5	4.1	5.3	5.0	12	1.8	0.04	0.05	0.00
20	1.5	5.8	2.2	1.5	12	5.7	5.1	10	1.2	0.01	0.42	0.00
21	1.7	5.5	2.0	1.6	7.9	5.5	126	9.4	1.9	0.00	0.31	0.00
22	2.5	5.4	2.3	1.8	5.4	5.3	46	8.7	1.7	0.00	0.17	0.00
23	2.6	5.5	2.3	2.1	4.5	5.5	17	8.7	1.3	0.00	0.49	0.00
24	3.5	7.4	2.1	2.2	4.1	6.9	11	11	1.0	0.00	0.38	0.00
25	4.1	8.6	e1.7	1.9	3.6	9.4	8.3	55	0.86	0.00	0.19	0.00
26	3.6	7.8	e0.90	1.7	2.9	9.4	7.0	17	0.69	0.00	0.14	0.00
27	2.9	6.5	e1.0	1.7	e2.1	8.7	253	18	0.57	0.00	0.10	0.00
28	2.8	5.7	e1.1	1.7	e1.8	9.8	130	15	0.49	0.93	0.06	0.00
29	3.3	5.2	e1.0	1.6	---	11	29	10	0.45	4.3	0.02	0.00
30	3.2	4.9	e0.50	e2.0	---	11	17	7.3	0.46	1.8	0.00	0.00
31	3.4	---	e0.45	e1.7	---	10	---	6.0	---	1.1	0.00	---
MEAN	18.1	4.71	3.44	1.45	4.84	6.89	30.2	117	3.37	0.37	0.12	0.00
MAX	229	8.6	9.1	2.2	19	20	253	1160	23	4.3	0.54	0.00
MIN	1.5	2.9	0.45	0.25	1.0	0.80	5.0	6.0	0.45	0.00	0.00	0.00
IN.	0.32	0.08	0.06	0.03	0.08	0.12	0.51	2.07	0.06	0.01	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	9.50	3.47	4.04	1.54	4.05	8.73	17.4	65.5	70.1	4.96	7.17	21.4
MEAN	9.50	3.47	4.04	1.54	4.05	8.73	17.4	65.5	70.1	4.96	7.17	21.4
MAX	18.1	4.71	4.65	1.64	4.84	10.6	30.2	117	137	9.55	14.2	42.8
(WY)	2002	2002	2000	2000	2002	2000	2002	2002	2000	2000	2000	2000
MIN	0.87	2.23	3.44	1.45	3.29	6.89	4.56	13.7	3.37	0.37	0.12	0.00
(WY)	2000	2000	2002	2002	2000	2002	2000	2000	2002	2002	2002	2002

SUMMARY STATISTICS

FOR 2002 WATER YEAR

FOR PERIOD OF RECORD

ANNUAL MEAN	16.1	18.1
HIGHEST ANNUAL MEAN		20.2
LOWEST ANNUAL MEAN		16.1
HIGHEST DAILY MEAN	1160	2180
LOWEST DAILY MEAN	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00
MAXIMUM PEAK FLOW	2520	5650
MAXIMUM PEAK STAGE	15.30	17.05
INSTANTANEOUS LOW FLOW	0.00	0.00
ANNUAL RUNOFF (INCHES)	3.33	3.77
10 PERCENT EXCEEDS	13	13
50 PERCENT EXCEEDS	3.0	2.1
90 PERCENT EXCEEDS	0.00	0.14

e Estimated

## 06821140 SMITHVILLE RESERVOIR NEAR SMITHVILLE, MO

LOCATION.--Lat 39°23'50", long 94°33'25", SW ¼ sec.13, T.53 N., R.33 W., Clay County, Hydrologic Unit 10240012, in control tower at outlet works on the Little Platte River, 1.0 mi northeast of Smithville, and 5.0 mi north of Kansas City.

DRAINAGE AREA.--213 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1981 to current year. Records collected at same site since 1976 are available from the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929.

REMARKS.--Lake is formed by a rolled earthfill type dam. Storage began on July 13, 1976. An uncontrolled limited service type spillway, 50 ft wide, is located at the right abutment. Capacity of surcharge pool 182,209 ac-ft (elevation 876.2 ft to 891.1 ft); of flood control pool 101,800 ac-ft (elevation 864.2 to 876.2 ft); and of multipurpose pool 144,600 ac-ft (elevation 799.0 ft to 864.2 ft). Lake is used for flood control, water supply, water-quality control, recreation, and fish and wildlife enhancement. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records furnished by U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 225,000 ac-ft, July 28, 1993, maximum elevation 874.31 ft; minimum, 2,360 ac-ft, Jan. 13, 1980, elevation, 819.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 160,000 ac-ft, May 17, elevation, 866.74 ft; minimum, 129,000 ac-ft, Feb. 8, elevation, 862.30 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002 OBSERVATION AT 0800												
DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	865.65	865.12	865.01	864.24	862.50	862.51	862.65	863.82	866.10	864.67	864.19	863.80
2	865.61	865.14	865.01	864.21	862.48	862.53	862.67	863.81	866.03	864.64	864.17	863.79
3	865.58	865.14	865.01	864.17	862.46	862.51	862.63	863.81	865.95	864.62	864.12	863.77
4	865.56	865.14	865.03	864.12	862.42	862.49	862.58	863.82	865.88	864.66	864.11	863.75
5	865.56	865.14	865.04	864.09	862.39	862.48	862.61	863.82	865.84	864.65	864.10	863.73
6	865.55	865.14	865.07	864.07	862.37	862.51	862.56	864.21	865.74	864.65	864.08	863.71
7	865.52	865.14	865.06	864.03	862.34	862.55	862.55	865.13	865.68	864.64	864.05	863.69
8	865.49	865.16	865.06	863.99	862.30	862.54	862.57	865.20	865.60	864.63	864.01	863.68
9	865.45	865.13	865.05	863.99	862.31	862.59	862.71	865.32	865.53	864.61	863.98	863.67
10	865.43	865.10	865.03	863.97	862.36	862.59	862.78	865.33	865.46	864.59	863.96	863.65
11	865.43	865.10	865.03	863.97	862.34	862.60	862.81	865.48	865.39	864.57	863.94	863.61
12	865.41	865.10	865.00	863.96	862.33	862.60	862.84	866.06	865.37	864.54	863.92	863.59
13	865.37	865.10	865.01	863.96	862.37	862.60	862.86	866.53	865.34	864.52	863.90	863.56
14	865.33	865.10	865.00	863.93	862.37	862.64	862.86	866.63	865.28	864.50	863.89	863.53
15	865.29	865.10	864.97	863.90	862.38	862.66	862.89	866.68	865.22	864.46	863.86	863.52
16	865.54	865.10	864.92	863.90	862.39	862.66	862.91	866.71	865.16	864.45	863.84	863.51
17	865.58	865.10	864.90	863.88	862.40	862.62	862.92	866.74	865.10	864.41	863.84	863.50
18	865.56	865.10	864.87	863.85	862.43	862.63	862.94	866.66	865.03	864.40	863.91	863.47
19	865.52	865.12	864.84	863.77	862.43	862.63	863.00	866.60	864.99	864.39	863.91	863.49
20	865.48	865.10	864.79	863.59	862.51	862.64	862.95	866.55	864.94	864.35	863.90	863.48
21	865.44	865.07	864.76	863.47	862.52	862.64	863.15	866.47	865.00	864.34	863.90	863.47
22	865.40	865.06	864.71	863.36	862.54	862.61	863.26	866.40	864.96	864.31	863.90	863.45
23	865.36	865.06	864.66	863.26	862.54	862.59	863.31	866.34	864.90	864.29	863.92	863.43
24	865.34	865.08	864.61	863.16	862.57	862.59	863.35	866.30	864.84	864.24	863.93	863.39
25	865.24	865.07	864.56	863.07	862.59	862.64	863.35	866.31	864.78	864.22	863.91	863.36
26	865.18	865.09	864.50	862.93	862.54	862.60	863.35	866.29	864.77	864.19	863.91	863.34
27	865.16	865.07	864.47	862.77	862.50	862.60	863.37	866.31	864.76	864.17	863.91	863.34
28	865.15	865.06	864.44	862.60	862.50	862.60	863.69	866.32	864.75	864.23	863.89	863.31
29	865.13	865.04	864.39	862.50	---	862.68	863.74	866.28	864.73	864.22	863.88	863.29
30	865.13	865.03	864.34	862.56	---	862.65	863.78	866.24	864.70	864.21	863.84	863.28
31	865.13	---	864.30	862.53	---	862.65	---	866.19	---	864.20	863.82	---
MEAN	865.41	865.10	864.82	863.61	862.43	862.59	862.99	865.75	865.26	864.44	863.95	863.54
MAX	865.65	865.16	865.07	864.24	862.59	862.68	863.78	866.74	866.10	864.67	864.19	863.80
MIN	865.13	865.03	864.30	862.50	862.30	862.48	862.55	863.81	864.70	864.17	863.82	863.28
(-)	148000	148000	142000	130000	130000	131000	139000	156000	145000	142000	139000	135000
(=)	-5000	0	-6000	-12000	0	+1000	+8000	+17000	-11000	-3000	-3000	-4000
CAL YR 2001....- 9000												
WTR YR 2002....-18000												

(-) Contents, in acre-feet, at the end of the month.  
(=) Change in contents, in acre-feet.

## PLATTE RIVER BASIN

06821150 LITTLE PLATTE RIVER AT SMITHVILLE, MO

LOCATION.--Lat 39°23'17", long 94°34'44", in NW ¼ SW ¼ sec.23, T.53 N., R.33 W., Clay County, Hydrologic Unit 10240012, on left bank behind city equipment shelter on old bridge abutment, 500 ft upstream from town bridge in Smithville, 1,500 ft upstream from bridge on U.S. Highway 169, 0.5 mi downstream from Wilkerson Creek, 2.4 mi downstream from Smithville Lake, and at mile 11.1.

DRAINAGE AREA.--234 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1965 to current year. Occasional measurements 1942, 1943, 1946, 1962-65.

REVISED RECORDS.--WRD MO 1970: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 778.18 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to Mar. 23, 1966, nonrecording gage at site 1,500 ft downstream at same datum.

REMARKS.--Records fair except for October and November and estimated daily discharges, which are poor. Construction of dam for Smithville Lake (06821140) began in June 1974 and partial regulation began Aug. 6, 1977. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1947 reached a stage of 37.4 ft.

REVISIONS.--The date of the maximum stage (31.87 ft) of the 2001 water year is Sept. 17, 2001. Date published in WDR MO-01-1 was incorrect.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	202	15	9.6	121	144	33	17	23	322	8.5	7.8	6.7
2	201	15	9.7	121	143	34	17	21	320	8.4	7.8	6.6
3	161	15	9.8	120	143	33	16	18	318	10	7.7	6.5
4	115	16	9.7	120	148	33	16	17	319	21	7.8	5.7
5	188	16	9.6	120	142	33	16	e17	325	17	7.9	5.6
6	134	15	9.3	121	141	36	16	e609	318	10	7.9	5.5
7	122	14	9.3	120	143	34	17	e292	316	9.2	7.8	4.9
8	130	13	9.2	98	153	34	23	e121	315	8.9	8.0	4.9
9	130	13	9.4	72	120	49	55	e72	314	8.4	8.0	5.5
10	132	15	20	71	34	39	17	e60	314	8.0	8.3	5.7
11	133	14	80	69	27	36	14	e107	342	7.8	8.3	5.5
12	130	14	130	67	24	35	23	e336	572	7.3	8.6	5.6
13	130	14	139	67	22	34	17	e64	225	7.3	8.9	5.5
14	130	13	131	69	22	33	14	e44	215	7.7	8.8	5.5
15	305	12	127	69	21	30	13	38	211	7.6	8.7	5.9
16	235	12	127	68	20	29	13	111	208	7.3	9.1	5.8
17	225	12	127	68	20	30	12	260	206	7.2	9.1	5.4
18	216	13	126	292	20	30	12	340	207	7.1	14	6.2
19	214	13	126	552	27	30	17	335	205	7.0	9.4	6.4
20	213	e12	125	547	84	31	33	333	204	7.0	7.9	6.1
21	214	12	125	544	34	30	786	329	203	7.0	7.4	6.0
22	216	13	126	545	28	29	67	327	203	6.9	7.4	5.9
23	218	12	126	543	26	30	38	326	202	6.9	9.2	6.3
24	218	15	125	542	24	30	29	327	133	7.7	8.5	6.4
25	218	13	125	544	23	31	24	384	10	8.1	7.8	6.2
26	114	11	125	546	21	30	21	332	9.6	7.9	7.5	5.7
27	11	9.8	124	545	20	29	203	558	9.4	8.0	7.3	6.2
28	11	9.3	124	401	26	31	70	351	9.1	8.7	7.0	6.3
29	11	9.3	123	198	---	31	31	334	9.1	11	7.0	5.6
30	11	9.6	123	139	---	28	26	328	9.0	8.8	7.0	5.2
31	14	---	122	144	---	18	---	324	---	8.0	6.8	---
MEAN	152	13.0	87.5	246	64.3	32.0	55.8	230	219	8.76	8.22	5.84
MAX	305	16	139	552	153	49	786	609	572	21	14	6.7
MIN	11	9.3	9.2	67	20	18	12	17	9.0	6.9	6.8	4.9
IN.	0.75	0.06	0.43	1.22	0.29	0.16	0.27	1.13	1.04	0.04	0.04	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1977 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	179	180	99.4	90.8	89.9	170	196	266	252	253	174	143
MAX	960	1358	466	563	341	825	640	850	809	879	1206	1006
(WY)	1986	1999	1993	1993	2001	2001	1978	1993	1995	2001	1993	1977
MIN	1.01	2.06	0.05	0.07	10.3	4.73	9.85	11.1	13.3	8.76	7.65	5.84
(WY)	1977	1977	1977	1977	1977	1981	1981	2000	1988	2002	1980	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1977 - 2002 <sup>a</sup>
ANNUAL MEAN	299	94.0	175
HIGHEST ANNUAL MEAN			476
LOWEST ANNUAL MEAN			35.4
HIGHEST DAILY MEAN	1720	786	7810
LOWEST DAILY MEAN	5.9	4.9	0.05
ANNUAL SEVEN-DAY MINIMUM	7.7	5.4	0.05
MAXIMUM PEAK FLOW	---	1770	21000
MAXIMUM PEAK STAGE	---	27.05	36.44
INSTANTANEOUS LOW FLOW	---	4.8	0.00
ANNUAL RUNOFF (INCHES)	17.36	5.46	10.15
10 PERCENT EXCEEDS	992	315	532
50 PERCENT EXCEEDS	124	26	21
90 PERCENT EXCEEDS	9.8	7.0	8.5

<sup>e</sup> Estimated

<sup>a</sup> Post-regulation period.

<sup>b</sup> Occurred during period of backwater.

## 06821190 PLATTE RIVER AT SHARPS STATION, MO

LOCATION.--Lat 39°24'03", long 94°43'36", in NW ¼ SE ¼ SW ¼ sec.16, T.53 N., R.34 W., Platte County, Hydrologic Unit 10240012, on downstream side of center pier at Sharps Bridge, 0.2 mi upstream from Jowler Creek, 3.3 mi downstream from Little Platte River, 3.6 mi south of Camden Point, and at mile 25.1.

DRAINAGE AREA.--2,380 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--December 1978 to current year.

GAGE.--Water-stage recorder. Datum of gage is 754.23 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Water-discharge records fair except for the period Aug. 10 to Sept. 30, and estimated daily discharges, which are poor. Some regulation from Smithville Lake (station 06821140), 17.0 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	487	245	248	e170	255	e170	374	1040	1120	215	e105	56
2	468	244	230	e150	e235	e175	314	876	970	176	e100	51
3	443	234	219	e150	e235	e155	269	687	878	155	e78	46
4	363	252	213	e155	e230	e145	228	567	810	158	e65	42
5	550	255	214	e180	e235	e165	202	486	816	186	e58	39
6	568	236	212	e170	e250	221	188	3660	771	298	e54	40
7	442	225	204	e175	e295	243	182	8300	721	188	e48	37
8	461	213	197	e160	343	248	204	4850	683	137	e46	30
9	442	201	193	e150	465	286	651	2820	643	124	e45	27
10	445	194	186	e175	395	477	773	1680	611	111	41	25
11	447	192	214	e195	398	506	559	2960	632	101	40	24
12	457	188	329	226	320	375	420	9800	1500	106	40	22
13	403	188	436	225	309	371	413	11200	3210	245	44	21
14	389	184	443	246	279	384	614	9890	1400	241	52	22
15	598	183	404	237	280	350	464	3890	992	131	66	25
16	1650	181	382	251	282	293	363	2130	914	145	75	28
17	1300	177	377	224	280	260	329	1760	738	160	84	26
18	824	174	370	260	279	242	298	1610	688	123	121	24
19	660	170	360	783	299	230	274	1480	708	99	132	37
20	587	166	344	761	502	222	290	1390	668	86	104	41
21	551	167	330	798	400	212	1570	1210	560	77	129	45
22	534	161	324	805	345	197	1540	1110	515	89	340	42
23	530	160	320	820	343	187	1190	1060	481	83	661	37
24	533	192	310	808	327	187	707	1070	448	71	360	33
25	558	338	254	804	295	198	526	1370	273	63	166	64
26	605	365	e190	782	254	208	428	2150	227	59	261	67
27	393	339	e195	780	205	205	666	2210	214	56	178	55
28	322	371	e200	740	176	212	1670	2020	417	75	103	47
29	291	326	e190	439	---	237	2040	1500	397	80	85	41
30	270	275	e200	306	---	246	1230	1230	271	83	75	37
31	256	---	e180	259	---	404	---	1340	---	83	64	---
MEAN	543	226	273	400	304	258	632	2818	776	129	123	37.7
MAX	1650	371	443	820	502	506	2040	11200	3210	298	661	67
MIN	256	160	180	150	176	145	182	486	214	56	40	21
IN.	0.26	0.11	0.13	0.19	0.13	0.13	0.30	1.37	0.36	0.06	0.06	0.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002, BY WATER YEAR (WY)

	MEAN	1210	1002	1051	598	1371	2116	2628	3442	3059	2853	1003	1309
MAX	6847	4932	5005	2153	3980	8745	6946	12710	10790	21600	3535	7206	
(WY)	1986	1999	1993	1983	1982	1979	1993	1995	1984	1993	1987	1993	
MIN	25.1	61.9	46.1	50.1	37.6	110	93.0	157	75.2	52.5	47.7	37.7	
(WY)	1989	1989	1989	1989	1989	1989	1989	1989	1988	1988	1988	2002	

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1979 - 2002

ANNUAL MEAN	2324	546	1805
HIGHEST ANNUAL MEAN			5697
LOWEST ANNUAL MEAN			386
HIGHEST DAILY MEAN	17100	Feb 28	37300
LOWEST DAILY MEAN	51	Jan 3	12 Aug 7,8,13,14 1989
ANNUAL SEVEN-DAY MINIMUM	56	Jan 1	14 Aug 7 1989
MAXIMUM PEAK FLOW	---		37800
MAXIMUM PEAK STAGE	---		36.43
INSTANTANEOUS LOW FLOW	---		12 Aug 7,8,13,14 1989
ANNUAL RUNOFF (INCHES)	13.26		10.31
10 PERCENT EXCEEDS	5820		4320
50 PERCENT EXCEEDS	869		627
90 PERCENT EXCEEDS	193		72

e Estimated

a Occurred during periods of backwater due to bridge construction.

## PLATTE RIVER BASIN

06821190 PLATTE RIVER AT SHARPS STATION, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1979 to September 1995, November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (mg/L) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED as Ca (mg/L) (00915)	MAGNE- SIUM, DIS- SOLVED as Mg (mg/L) (00925)	POTAS- SIUM, DIS- SOLVED as K (mg/L) (00935)
NOV 19...	1040	ENVIRONMENTAL	171	10.1	96	8.1	515	12.5	230	72.0	13.1	3.67
JAN 25...	1100	ENVIRONMENTAL	807	13.6	100	8.3	295	2.0	140	42.4	7.72	4.51
MAR 06...	1120	ENVIRONMENTAL	224	14.6	115	8.1	513	4.0	--	--	--	--
MAY 17...	1145	ENVIRONMENTAL	1730	8.4	92	7.9	391	18.5	170	50.8	9.72	4.55
JUL 12...	1125	ENVIRONMENTAL	109	4.5	59	8.0	474	27.5	--	--	--	--

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
NOV 19...	13.7	224	226	276	0	17.3	.3	30.5	10	296	<.04	.56	.24
JAN 25...	9.63	126	126	154	0	12.8	.2	17.1	126	176	.05	.72	.55
MAR 06...	--	211	212	259	0	--	--	--	12	--	.09	.40	.98
MAY 17...	9.42	134	134	164	0	10.6	.3	24.1	945	256	E.04	2.0	6.25
JUL 12...	--	198	196	240	0	--	--	--	--	--	<.04	1.3	.41

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
NOV 19...	E.004	E.03	.02	.13	<2	58	K40	3	106	1.1	<.04	<.1	<6
JAN 25...	.013	<.06	E.01	.15	100	120	72	4	1010	1.1	<.04	<.1	E4
MAR 06...	.011	<.06	.02	.10	K44	K20	120	--	--	--	--	--	--
MAY 17...	.090	.08	.08	.80	K840	970	2200	1	6830	1.8	<.04	.4	E4
JUL 12...	.012	E.05	.05	.31	K48	800	420	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 19...	63	E.07	<1	204	<.01	.4	2	3
JAN 25...	<10	<.08	2	98.8	<.01	.5	<1	7
MAR 06...	--	--	--	--	--	--	--	--
MAY 17...	<10	<.08	14	4.7	.03	1.3	1	42
JUL 12...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.



06892350 KANSAS RIVER AT DESOTO, KS

LOCATION.--Lat 38°59'00", long 94°57'52", in SE ¼ NE ¼ NE ¼ sec.27, T.12 S., R.22 E., Leavenworth County, Hydrologic Unit 10270104, on left bank at downstream side of bridge on county highway, north edge of DeSoto, 0.4 mi upstream from Kill Creek, and at mile 31.0.

DRAINAGE AREA.--59,756 mi<sup>2</sup>, of which a large area is noncontributing.

PERIOD OF RECORD.--July 1917 to current year. Monthly discharge only for some periods published in WSP 1310. Prior to October 1973, published as "at Bonner Springs."

REVISED RECORDS.--WSP 806: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 753.87 ft above National Geodetic Vertical Datum of 1929. July 9, 1917, to Apr. 23, 1934, nonrecording gage; Apr. 24, 1934, to Nov. 25, 1960, water-stage recorder at site 9.7 mi downstream at datum 11.81 ft lower; Nov. 26, 1960, to Feb. 9, 1961, nonrecording gage; Feb. 10, 1961, to Sept. 30, 1971, water-stage recorder at site 10.2 mi downstream at datum 17.81 ft lower; and Oct. 1, 1971, to Sept. 30, 1973, at site 10.2 mi downstream at datum 22.81 ft lower. Lowered gage datum 5.0 ft Sept. 30, 1996, to 753.87 ft.

REMARKS.--Records fair. Natural flow affected by lakes and reservoirs in Colorado, Nebraska, and Kansas, and by numerous diversions upstream from station. Diurnal fluctuations caused by hydroelectric plant 20.8 mi upstream; since storage capacity is small, daily flows are not affected appreciably. Satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known since at least 1844, that of July 13, 1951.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15500	2050	1710	2820	2070	2110	1940	3240	8180	3500	1440	1060
2	15100	2360	1680	2340	2160	2070	1760	3080	8610	3400	1130	1160
3	9940	2410	1700	2190	2300	2030	1830	2890	8540	3430	1110	1020
4	7110	2440	1620	1980	2310	1840	1870	2460	7310	3480	1130	1030
5	6330	2450	1200	1790	2180	1420	1870	2310	9590	3500	1170	1140
6	5850	2430	1560	2150	2090	2390	1860	4500	7160	3460	1200	1090
7	5230	2370	2030	2720	2380	2480	1850	10000	7180	3270	1200	1110
8	4540	2310	1220	2470	1860	2170	1860	10700	7100	3260	1190	1100
9	4240	2190	1650	2500	2220	1840	2250	8980	7110	3550	1160	1090
10	3950	2260	1770	2710	2060	1980	2830	5580	7080	3840	1150	1130
11	3910	2260	1650	2530	2260	1880	2530	5440	7030	3500	1140	993
12	3630	2230	1590	2530	2470	1990	2420	13200	7320	3240	1140	941
13	3700	2180	1640	2390	2400	1850	3060	15800	5960	3210	1450	1000
14	3560	2220	1620	2250	2260	1830	2930	9150	3930	2950	1620	1250
15	3790	2160	1650	2150	2200	1800	2500	6360	3470	2920	1500	1260
16	4470	2080	1690	2150	1890	1790	2330	5400	4250	2740	1190	1230
17	4290	2120	1710	2180	1870	1780	2250	5880	4630	2370	1180	1030
18	3860	2140	1670	1750	2020	1760	2160	10500	4910	2570	1480	1160
19	3400	2230	1670	1470	2560	1630	2130	9900	4830	2350	2240	1200
20	2780	2260	1770	2350	3090	1550	2290	7170	5320	2340	1450	1120
21	2640	2220	3330	3100	3120	1380	11400	4940	5520	2320	1800	1330
22	2570	2140	4170	3100	2640	1520	6710	4190	5340	1840	1400	1320
23	2640	2240	4280	3150	2290	1620	5230	3890	5800	1420	1150	1170
24	2570	2510	4340	3100	2110	2120	3810	4160	5780	1320	1040	981
25	2490	2720	4340	2960	1920	2160	3020	7270	5880	1200	1020	1020
26	2440	2510	4270	2750	2020	2190	2810	5290	5620	1200	996	1020
27	2410	2380	4500	2100	1830	2200	3940	5330	4890	1230	1070	1020
28	2340	2020	4450	2110	1480	2150	5230	7210	4260	1270	1230	1030
29	2260	1840	4340	2360	---	1970	3490	7410	3870	1160	1080	1030
30	2200	1740	4130	2060	---	1870	3210	7530	3650	1490	1000	1030
31	2270	---	3440	2040	---	1990	---	7840	---	1840	1020	---
MEAN	4581	2249	2529	2395	2216	1915	3112	6697	6004	2554	1261	1102
MAX	15500	2720	4500	3150	3120	2480	11400	15800	9590	3840	2240	1330
MIN	2200	1740	1200	1470	1480	1380	1760	2310	3470	1160	996	941

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1918 - 2002, BY WATER YEAR (WY)

MEAN	5746	4630	3637	2909	4525	7134	9641	11140	15040	11690	6951	6592
MAX	51630	42320	21940	15990	20800	36560	43570	43270	78870	133200	66680	44660
(WY)	1974	1974	1974	1973	1949	1973	1973	1993	1951	1951	1993	1951
MIN	365	504	465	364	635	632	845	953	1188	1106	455	525
(WY)	1957	1957	1957	1957	1957	1967	1956	1989	1989	1936	1934	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1918 - 2002	
ANNUAL MEAN	8298		3057		7476	
HIGHEST ANNUAL MEAN					30570	
LOWEST ANNUAL MEAN					1326	
HIGHEST DAILY MEAN	68500	Jun 21	15800	May 13	486000	Jul 14 1951
LOWEST DAILY MEAN	950	Jan 3	941	Sep 12	160	Oct 11 1956
ANNUAL SEVEN-DAY MINIMUM	1290	Jan 1	1020	Sep 24	195	Oct 9 1956
MAXIMUM PEAK FLOW	---		21800	May 12	510000	Jul 13 1951
MAXIMUM PEAK STAGE	---		11.65	May 12	37.30	Jul 13 1951
INSTANTANEOUS LOW FLOW	---		809	Sep 12	160	Oct 11 1956
ANNUAL RUNOFF (AC-FT)	6008000		2213000		5416000	
10 PERCENT EXCEEDS	21600		5880		17800	
50 PERCENT EXCEEDS	4770		2260		3390	
90 PERCENT EXCEEDS	1770		1160		1100	

06893000 MISSOURI RIVER AT KANSAS CITY, MO

LOCATION.--Lat 39°06'43", long 94°35'16", in sec.32, T.50 N., R.33 W., Jackson County, Hydrologic Unit 10300101, on downstream side of right pier of Chicago, Burlington and Quincy Railroad Bridge at Kansas City, 1.4 mi downstream from Kansas River, and at mile 366.1.

DRAINAGE AREA.--484,100 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only, published in WSP 1310. Gage-height records collected at same site 1873-99 are contained in reports of the Missouri River Commission; those since 1900 are contained in reports of the National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 706.40 ft above National Geodetic Vertical Datum of 1929. Prior to May 4, 1931, nonrecording gage; May 4, 1931, to Aug. 23, 1934, water-stage recorder, at present site; Aug. 24, 1934, to May 15, 1947, water-stage recorder at site 200 ft upstream; May 16, 1947, to Feb. 28, 1948, nonrecording gage at present site; all gages prior to Oct. 1, 1989, at datum 10.00 ft higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. Some regulation from many upstream reservoirs. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 573,000 ft<sup>3</sup>/s, July 14, 1951.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 16, 1844, reached a stage of 48.0 ft, present datum; discharge, about 625,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48500	36800	37900	e24200	25800	25900	34800	40300	47600	36700	30600	37300
2	50200	36600	36500	e23300	24700	25800	35000	40400	47400	36300	30200	37100
3	47300	37200	34300	e22800	24100	24200	35400	39100	46300	36000	29900	36200
4	42800	37200	32600	22300	23200	23600	36300	38000	45200	36400	29600	35800
5	44100	37500	31100	22300	22600	23600	37100	37500	45600	35500	29400	35900
6	41800	37800	29800	22400	22800	23000	37100	46600	44900	35500	29500	36000
7	40200	37500	29700	22600	23000	22900	36500	58900	43700	35200	29800	35600
8	38800	37500	29700	23300	23100	23600	36300	60500	43100	35000	30400	35400
9	37900	37000	29200	23800	23500	25000	36400	52900	42800	34600	32300	35400
10	37800	37000	29600	24900	24400	25300	36400	47400	42200	e35000	32800	35400
11	38100	37000	29300	25200	25300	25600	36700	46900	41900	e35000	31600	35300
12	39200	37100	29200	24600	26400	25100	36800	60200	46200	34400	31200	35100
13	39400	37100	29200	24800	26800	25000	37500	72800	47400	34800	32200	35200
14	39400	37000	28900	25700	26800	25300	38600	68000	51600	35600	31800	35700
15	43200	36800	28500	26300	27100	25800	37800	62900	57600	35900	32700	36300
16	45700	36600	28100	26700	27200	27900	37000	e55000	52300	34500	32700	36500
17	44000	36600	28100	27100	27200	33200	36700	e49000	47200	33500	31600	36600
18	41600	36600	28000	26700	26800	34400	36800	50300	45700	33300	32300	36700
19	40800	37200	27700	25900	27800	31400	37600	49800	45000	32900	33200	36600
20	39800	37600	27600	25200	28900	29200	38000	47600	43700	32500	35000	36000
21	39500	37700	27900	26000	28800	28700	49000	44800	43100	32200	37900	35700
22	39200	37600	29300	26400	28700	28600	46900	42500	42100	31800	40700	36100
23	38800	37300	29400	25900	28100	29000	41700	41500	41400	31300	39100	35900
24	38700	38100	29200	25400	27400	30900	39900	41700	41400	30900	41400	34800
25	39200	39000	28800	25300	26800	33200	38500	48900	41300	30700	53700	34000
26	38600	40600	28600	25100	26400	34800	38100	48200	40400	30700	46600	33400
27	38300	41600	28500	24900	26100	36300	40300	49300	39900	30800	43300	33100
28	37900	42500	27800	24900	25900	35600	44000	49400	40500	31200	41300	33100
29	37700	40800	26900	25700	---	34400	43400	e47500	37700	32500	39200	33900
30	37900	38600	26200	26600	---	34800	41400	e47500	37200	32500	37800	34300
31	37400	---	25700	27100	---	35000	---	e48500	---	31200	37000	---
MEAN	40770	37850	29460	24950	25920	28620	38600	49480	44410	33690	35060	35480
MAX	50200	42500	37900	27100	28900	36300	49000	72800	57600	36700	53700	37300
MIN	37400	36600	25700	22300	22600	22900	34800	37500	37200	30700	29400	33100
IN.	0.10	0.09	0.07	0.06	0.06	0.07	0.09	0.12	0.10	0.08	0.08	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	56600	52690	36820	29530	38640	56250	70720	72810	78340	70300	56720	57730
MAX	135200	103200	75370	60980	77690	133700	148900	145800	173800	288300	144300	115600	
(WY)	1974	1999	1987	1973	1973	1979	1984	1995	1984	1993	1993	1993	
MIN	34650	20560	12970	13800	16610	20190	36370	37230	40410	33690	33850	34510	
(WY)	1992	1991	1964	1963	1964	1964	1990	1989	1989	2002	1991	1991	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002 <sup>a</sup>
ANNUAL MEAN	53540	35390	56470
HIGHEST ANNUAL MEAN			102100
LOWEST ANNUAL MEAN			35390
HIGHEST DAILY MEAN	166000	Jun 21	529000
LOWEST DAILY MEAN	21900	Jan 25,26	4730
ANNUAL SEVEN-DAY MINIMUM	22700	Jan 22	5480
MAXIMUM PEAK FLOW	---		541000
MAXIMUM PEAK STAGE	---		48.87
INSTANTANEOUS LOW FLOW	---		4240
ANNUAL RUNOFF (INCHES)	1.50		1.58
10 PERCENT EXCEEDS	87000		94200
50 PERCENT EXCEEDS	44100		48700
90 PERCENT EXCEEDS	26200		25200

e Estimated

a Post-regulation period.

06893500 BLUE RIVER AT KANSAS CITY, MO

LOCATION.--Lat 38°57'26", long 94°33'31", in SE ¼ NE ¼ sec.28, T.48 N., R.33 W., Jackson County, Hydrologic Unit 10300101, on downstream side of right pier of bridge on Bannister Road, 0.4 mi downstream from Indian Creek, in Kansas City, and at mile 23.2.

DRAINAGE AREA.--188 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1939 to current year.

REVISED RECORDS.--WSP 926: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 753.73 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to July 1, 1939, nonrecording gage at same site and datum.

REMARKS.--Water-discharge records good. Low flow regulated by commercial plants above station. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Nov. 17, 1928, reached a stage of about 39 ft, from information by the city of Kansas City.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	31	33	42	277	51	24	139	107	20	25	21
2	27	30	33	40	235	84	21	124	89	20	23	19
3	25	27	33	41	232	67	22	99	77	22	27	19
4	27	31	32	41	196	59	21	88	130	58	27	20
5	602	32	29	42	140	68	24	82	138	37	25	23
6	102	27	32	42	114	73	22	239	75	26	24	23
7	66	30	31	44	102	65	24	448	62	22	25	24
8	51	29	30	40	97	61	184	1160	54	85	24	24
9	40	24	30	41	93	287	177	2270	143	21	22	26
10	86	30	30	39	87	102	75	370	129	36	22	26
11	49	31	30	38	84	80	56	1150	138	60	35	25
12	37	31	123	36	73	70	51	7970	1560	60	32	25
13	33	31	151	36	68	64	44	1040	203	42	970	24
14	32	31	58	37	66	55	43	378	122	21	87	109
15	659	28	48	36	64	53	40	264	90	18	51	99
16	206	28	46	37	61	50	36	375	71	17	41	36
17	102	29	44	36	58	46	37	396	59	15	69	26
18	78	30	42	33	57	44	32	257	50	15	61	63
19	62	42	44	48	586	44	196	178	43	490	170	273
20	52	31	42	57	480	48	482	146	37	166	57	74
21	46	27	46	51	180	36	2840	124	32	40	36	40
22	41	29	44	45	117	34	356	108	29	26	29	29
23	37	28	42	43	94	35	205	121	25	23	32	27
24	40	240	41	42	81	35	150	248	24	21	25	25
25	41	63	42	40	71	40	115	5320	27	17	25	23
26	39	50	42	40	63	38	114	459	123	16	25	21
27	34	45	43	41	56	34	1750	407	162	17	23	21
28	32	40	44	40	52	86	611	260	35	35	22	20
29	30	36	44	47	---	45	238	199	25	270	21	20
30	29	35	46	269	---	30	174	158	22	43	20	20
31	29	---	40	772	---	26	---	130	---	28	21	---
MEAN	89.2	39.9	45.6	72.1	138	61.6	272	797	129	57.6	67.6	40.8
MAX	659	240	151	772	586	287	2840	7970	1560	490	970	273
MIN	25	24	29	33	52	26	21	82	22	15	20	19
IN.	0.55	0.24	0.28	0.44	0.77	0.38	1.62	4.89	0.77	0.35	0.41	0.24

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	MEAN	132	111	95.8	94.4	132	188	273	268	294	168	83.5	168
MAX	790	926	726	445	740	1407	1279	1457	1285	1616	431	1395	
(WY)	1987	1999	1993	1941	1985	1973	1944	1990	1967	1951	1982	1986	
MIN	0.00	0.00	0.00	0.00	2.66	4.36	6.41	17.8	7.44	1.72	0.94	0.05	
(WY)	1940	1940	1940	1940	1940	1957	1954	1956	1953	1946	1947	1939	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1939 - 2002

ANNUAL MEAN	258	151	167	
HIGHEST ANNUAL MEAN			437	1993
LOWEST ANNUAL MEAN			12.8	1956
HIGHEST DAILY MEAN	9020	Jun 4	7970	May 12
LOWEST DAILY MEAN	24	Nov 9	15	Jul 17,18
ANNUAL SEVEN-DAY MINIMUM	29	Nov 3	20	Aug 29
MAXIMUM PEAK FLOW	---		10400	May 12
MAXIMUM PEAK STAGE	---		24.58	May 12
INSTANTANEOUS LOW FLOW	---		13	Jul 27,28
ANNUAL RUNOFF (INCHES)	18.64		10.94	
10 PERCENT EXCEEDS	416		239	
50 PERCENT EXCEEDS	89		42	
90 PERCENT EXCEEDS	31		23	
				6.8

06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1998 to current year.

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE.--August 1998 to current year.

pH.--August 1998 to current year.

SPECIFIC CONDUCTANCE.--August 1998 to current year.

DISSOLVED OXYGEN.--August 1998 to current year.

TURBIDITY.--August 1998 to current year.

INSTRUMENTATION.--Water-quality monitor seasonally since August 1998. Electronic data logger with 15 minute recording interval and 4 hour satellite transmission interval. The monitor is not operated during the winter months.

REMARKS.--The number of missing days of record exceeds 20 percent of the year. The monitor was not operated from Dec. 10 to April 4. Unpublished records prior to October 2000 are available in files of the Sub-district office. Interruptions in the record are generally due to malfunction or fouling of the sensors, where possible missing record has been estimated. Daily value estimations were based on partial data, inspection of contiguous data, hydrograph comparison and the best judgment of the hydrographer. Detailed records of the procedures employed for estimating data and/or data shifts for specific periods of record have been included with the station analysis and are kept on file. The manufacturers' specified range for turbidity sensors used is 0 to 1000 NTU. All numbers beyond this limit may be considered as >1000 NTU. Values >1000 NTU are maintained for continuity of the record. Specific Conductance records were rated either good or excellent except for the following period: October 1-3 rated fair. pH records were rated either good or excellent. Water temperature records were rated excellent. Dissolved oxygen records were rated either good or excellent except for the following periods: November 24-December 10 and April 9-18 rated poor; August 11-16 rated poor-estimated. Turbidity records were rated either good or excellent except for the following periods: October 14-19, 22-29 rated poor-estimated

## EXTREMES FOR PERIOD OF DAILY RECORD.--(more than 20 percent of record missing)

WATER TEMPERATURE.--Maximum recorded, 32.9 °C, July 27, 29, 1999.

pH.--Maximum recorded, 8.9 standard units, July 12-13, 2000; minimum recorded, 7.0 standard units, May 1, 9, 2000.

SPECIFIC CONDUCTANCE.--Maximum recorded, 1,120 microsiemens per centimeter (µS/cm), Nov. 11, 1999; minimum recorded, 109 µS/cm, June 28, 1999.

DISSOLVED OXYGEN.--Maximum recorded, 16.1 mg/L, Oct. 9, 1998; minimum recorded, 0.3 mg/L, April 21, 2002.

TURBIDITY.--Maximum recorded, 2,700 NTU, May 11-12, 2002; minimum recorded, 0.0 NTU, many days August to November 1998, July to November 1999, and April to September 2000.

## EXTREMES FOR CURRENT YEAR.--(more than 20 percent of record missing)

WATER TEMPERATURE.--Maximum, 32.3 °C, August 1.

pH.--Maximum recorded, 8.8 standard units, April 6; minimum recorded, 7.3 standard units, Nov. 15, 17-19, and 24.

SPECIFIC CONDUCTANCE.--Maximum recorded, 1,015 µS/cm, Nov. 14; minimum recorded, 185 µS/cm, May 25.

DISSOLVED OXYGEN.--Maximum recorded, 13.6 mg/L, April 5; minimum recorded, 0.3 mg/L, April 21.

TURBIDITY.--Maximum recorded, 2700 NTU, May 11-12; minimum recorded, 2.0 NTU, Nov. 21.

## WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER				NOVEMBER			DECEMBER			JANUARY		
1	19.1	16.8	18.0	16.0	14.5	15.3	7.3	6.0	6.7	---	---	---
2	19.5	17.1	18.3	16.4	15.0	15.7	8.5	6.4	7.4	---	---	---
3	20.1	18.0	19.1	16.0	14.4	15.1	10.9	8.5	9.5	---	---	---
4	20.1	18.6	19.6	16.3	15.0	15.5	13.6	10.9	12.3	---	---	---
5	18.6	13.8	14.9	16.4	14.7	15.5	15.0	12.4	13.8	---	---	---
6	14.4	12.5	13.6	16.5	14.6	15.6	12.9	10.9	12.0	---	---	---
7	14.6	12.8	13.9	16.8	15.3	16.0	10.9	9.7	10.3	---	---	---
8	15.8	14.1	15.0	16.0	13.1	14.9	9.9	7.8	9.0	---	---	---
9	17.4	15.7	16.5	13.1	10.9	11.8	7.8	6.5	7.1	---	---	---
10	18.9	17.3	18.1	12.4	10.6	11.4	---	---	---	---	---	---
11	18.5	16.9	17.6	12.2	10.6	11.4	---	---	---	---	---	---
12	17.1	15.9	16.3	12.2	10.7	11.5	---	---	---	---	---	---
13	17.1	15.7	16.2	13.7	12.1	12.9	---	---	---	---	---	---
14	16.1	14.6	15.4	15.2	13.5	14.4	---	---	---	---	---	---
15	15.0	10.7	13.0	16.0	14.6	15.2	---	---	---	---	---	---
16	11.4	9.8	10.7	15.9	14.5	15.2	---	---	---	---	---	---
17	12.3	10.1	11.3	15.5	14.3	15.0	---	---	---	---	---	---
18	13.7	11.7	12.6	15.5	15.0	15.3	---	---	---	---	---	---
19	13.8	12.4	13.2	15.1	11.6	13.3	---	---	---	---	---	---
20	15.2	12.8	14.0	11.6	9.4	10.2	---	---	---	---	---	---
21	17.4	15.2	16.2	9.6	8.3	9.1	---	---	---	---	---	---
22	18.4	17.4	17.9	10.7	9.1	9.8	---	---	---	---	---	---
23	19.7	17.9	18.7	11.9	10.2	11.0	---	---	---	---	---	---
24	19.0	16.4	17.9	14.2	11.2	12.2	---	---	---	---	---	---
25	16.4	13.2	14.5	11.2	10.3	10.9	---	---	---	---	---	---
26	13.2	11.4	12.1	12.2	10.6	11.2	---	---	---	---	---	---
27	11.4	9.7	10.6	10.6	7.8	9.0	---	---	---	---	---	---
28	12.0	10.0	11.0	7.8	6.1	6.8	---	---	---	---	---	---
29	13.3	11.6	12.4	6.3	5.9	6.1	---	---	---	---	---	---
30	14.6	12.8	13.6	7.2	6.3	6.7	---	---	---	---	---	---
31	14.8	13.6	14.2	---	---	---	---	---	---	---	---	---
MONTH	20.1	9.7	15.0	16.8	5.9	12.5	---	---	---	---	---	---

06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	17.9	16.0	16.8
2	---	---	---	---	---	---	---	---	---	16.9	14.5	15.7
3	---	---	---	---	---	---	---	---	---	17.5	14.4	16.0
4	---	---	---	---	---	---	---	---	---	19.3	15.2	17.2
5	---	---	---	---	---	---	14.1	10.0	12.0	21.7	17.2	19.4
6	---	---	---	---	---	---	14.6	11.5	13.0	20.9	19.1	20.3
7	---	---	---	---	---	---	13.6	12.6	13.1	20.5	18.9	19.6
8	---	---	---	---	---	---	12.8	12.2	12.5	18.9	17.5	18.3
9	---	---	---	---	---	---	15.5	11.1	13.1	18.6	16.7	17.5
10	---	---	---	---	---	---	17.6	12.8	15.1	17.8	15.3	16.5
11	---	---	---	---	---	---	17.5	15.3	16.5	18.7	15.4	16.5
12	---	---	---	---	---	---	17.3	16.0	16.6	18.7	15.7	17.5
13	---	---	---	---	---	---	16.7	14.8	15.9	17.2	14.4	15.8
14	---	---	---	---	---	---	20.0	15.3	17.5	19.0	14.9	16.9
15	---	---	---	---	---	---	23.1	18.8	20.7	20.1	16.8	18.4
16	---	---	---	---	---	---	22.2	21.0	21.6	20.3	18.1	19.3
17	---	---	---	---	---	---	24.0	20.7	22.1	19.8	17.2	18.5
18	---	---	---	---	---	---	24.2	22.3	23.1	18.7	15.7	17.3
19	---	---	---	---	---	---	23.3	18.9	20.4	18.6	16.2	17.5
20	---	---	---	---	---	---	18.9	14.6	17.2	19.1	16.2	17.8
21	---	---	---	---	---	---	15.4	12.7	14.1	19.4	16.8	18.3
22	---	---	---	---	---	---	16.9	13.0	14.9	20.7	17.9	19.3
23	---	---	---	---	---	---	19.4	15.6	17.5	20.3	19.1	19.6
24	---	---	---	---	---	---	19.3	17.4	18.6	19.2	16.9	18.6
25	---	---	---	---	---	---	17.8	15.1	16.6	17.5	15.9	16.6
26	---	---	---	---	---	---	17.0	15.3	16.0	20.0	16.2	17.9
27	---	---	---	---	---	---	15.3	12.8	13.9	21.1	18.4	19.6
28	---	---	---	---	---	---	16.4	13.5	14.8	22.5	19.6	21.0
29	---	---	---	---	---	---	17.8	14.2	15.9	23.8	20.5	22.2
30	---	---	---	---	---	---	18.5	16.1	17.3	25.1	22.0	23.6
31	---	---	---	---	---	---	---	---	---	26.5	23.6	25.1
MONTH	---	---	---	---	---	---	---	---	---	26.5	14.4	18.5
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	27.6	24.9	26.2	29.4	27.4	28.3	32.3	28.9	30.5	27.8	25.1	26.3
2	28.7	25.6	27.0	27.8	26.6	27.2	31.1	28.4	29.8	28.5	25.7	26.9
3	29.1	26.0	27.4	28.7	26.1	27.2	31.5	28.4	29.9	28.2	26.0	27.0
4	27.6	23.3	26.1	28.0	26.2	27.1	31.2	29.1	30.2	28.2	25.4	26.7
5	23.7	22.5	23.1	28.8	24.9	26.8	31.4	28.9	30.1	28.5	26.0	27.2
6	25.1	21.4	23.2	30.7	27.2	28.8	30.5	28.2	29.3	29.0	26.4	27.6
7	26.5	22.3	24.3	30.9	28.4	29.6	29.4	26.8	28.0	28.6	26.0	27.3
8	27.0	23.8	25.4	30.3	26.6	28.7	28.5	25.6	27.1	28.7	26.3	27.4
9	26.1	23.6	24.9	31.9	28.2	30.0	27.8	25.4	26.6	28.2	25.7	26.9
10	24.9	23.0	23.9	30.7	28.5	29.7	26.7	25.3	26.1	27.2	25.2	26.2
11	25.4	24.1	24.8	28.9	25.9	27.7	28.1	25.1	26.3	25.9	24.0	24.9
12	25.1	23.1	24.2	27.1	24.9	26.1	26.9	25.4	26.2	24.4	22.6	23.5
13	24.8	23.7	24.2	27.2	25.3	26.4	26.1	22.2	23.6	24.2	22.3	23.2
14	23.7	21.7	22.9	28.3	24.4	26.3	24.9	21.4	23.1	23.5	22.8	23.1
15	24.7	21.6	23.1	28.9	25.1	26.9	25.7	23.0	24.4	23.1	21.7	22.5
16	25.5	22.1	23.7	29.5	26.1	27.7	27.6	25.1	26.2	23.2	20.8	22.1
17	25.9	22.2	24.0	30.8	26.7	28.6	26.9	24.6	25.6	23.8	22.0	22.8
18	25.0	23.5	24.2	31.3	27.4	29.3	26.0	23.5	24.7	25.0	22.7	23.7
19	26.8	23.1	24.9	31.7	26.2	28.7	26.3	24.6	25.5	24.4	21.6	22.7
20	28.6	24.9	26.6	29.8	25.8	27.7	27.2	24.3	25.7	22.5	20.6	21.5
21	29.7	26.4	28.0	31.0	27.6	29.2	27.9	26.2	27.0	22.5	19.9	21.2
22	30.4	27.2	28.7	30.0	28.6	29.4	29.1	26.3	27.6	21.3	19.6	20.5
23	30.3	27.0	28.5	29.4	26.9	28.1	29.0	27.1	28.1	20.1	18.0	19.1
24	29.8	26.9	28.4	29.8	26.3	28.0	28.2	26.3	27.0	19.9	17.8	18.9
25	30.9	27.0	28.8	30.6	26.9	28.6	27.7	24.9	26.2	20.6	18.1	19.2
26	31.3	25.8	28.6	32.2	28.1	30.0	27.9	25.2	26.5	21.2	18.6	19.8
27	28.3	24.0	26.2	32.0	28.7	30.3	27.5	25.6	26.5	21.2	19.3	20.1
28	29.6	26.0	27.8	31.4	28.8	30.0	28.1	25.6	26.7	21.6	19.1	20.3
29	31.3	27.8	29.4	29.3	25.6	27.5	27.6	25.3	26.4	23.1	20.7	21.7
30	30.3	28.4	29.4	30.6	27.0	28.7	27.2	24.6	25.8	23.8	21.8	22.6
31	---	---	---	31.2	27.8	29.5	27.4	24.9	26.0	---	---	---
MONTH	31.3	21.4	25.9	32.2	24.4	28.3	32.3	21.4	26.9	29.0	17.8	23.4

## BLUE RIVER BASIN

06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

pH, WH, FIELD, (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	7.8	7.6	7.7	7.8	7.6	7.7	7.7	7.6	7.6	---	---	---
2	7.7	7.6	7.7	7.7	7.6	7.6	7.7	7.6	7.6	---	---	---
3	8.0	7.7	7.8	7.7	7.6	7.6	7.6	7.5	7.6	---	---	---
4	7.9	7.8	7.9	7.6	7.5	7.6	7.6	7.6	7.6	---	---	---
5	7.9	7.7	7.9	7.7	7.5	7.6	7.7	7.6	7.6	---	---	---
6	7.9	7.8	7.8	7.7	7.5	7.6	7.8	7.6	7.7	---	---	---
7	7.9	7.8	7.8	7.6	7.5	7.5	7.8	7.7	7.7	---	---	---
8	7.9	7.9	7.9	7.6	7.5	7.5	7.7	7.7	7.7	---	---	---
9	8.0	7.9	7.9	7.7	7.5	7.6	7.8	7.7	7.7	---	---	---
10	8.0	7.8	7.8	7.6	7.5	7.5	---	---	---	---	---	---
11	7.8	7.7	7.7	7.6	7.5	7.6	---	---	---	---	---	---
12	7.8	7.7	7.7	7.6	7.5	7.6	---	---	---	---	---	---
13	7.8	7.7	7.8	7.6	7.4	7.5	---	---	---	---	---	---
14	7.8	7.8	7.8	7.6	7.4	7.5	---	---	---	---	---	---
15	8.0	7.7	7.8	7.6	7.3	7.5	---	---	---	---	---	---
16	8.0	7.8	7.9	7.5	7.4	7.4	---	---	---	---	---	---
17	8.0	7.9	8.0	7.4	7.3	7.4	---	---	---	---	---	---
18	8.0	8.0	8.0	7.4	7.3	7.4	---	---	---	---	---	---
19	8.0	7.9	7.9	7.5	7.3	7.4	---	---	---	---	---	---
20	7.9	7.8	7.8	7.8	7.5	7.7	---	---	---	---	---	---
21	7.8	7.7	7.8	7.9	7.6	7.8	---	---	---	---	---	---
22	7.8	7.7	7.7	7.8	7.6	7.7	---	---	---	---	---	---
23	7.7	7.6	7.6	7.7	7.6	7.7	---	---	---	---	---	---
24	7.7	7.6	7.6	7.7	7.3	7.6	---	---	---	---	---	---
25	7.8	7.6	7.7	7.6	7.5	7.6	---	---	---	---	---	---
26	7.9	7.7	7.8	7.6	7.5	7.5	---	---	---	---	---	---
27	7.9	7.8	7.8	7.6	7.5	7.6	---	---	---	---	---	---
28	7.9	7.8	7.8	7.6	7.6	7.6	---	---	---	---	---	---
29	7.9	7.7	7.8	7.6	7.4	7.6	---	---	---	---	---	---
30	7.9	7.7	7.8	7.6	7.4	7.5	---	---	---	---	---	---
31	7.9	7.7	7.8	---	---	---	---	---	---	---	---	---
MONTH	8.0	7.6	7.8	7.9	7.3	7.6	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	8.0	7.9	7.9
2	---	---	---	---	---	---	---	---	---	8.0	7.9	8.0
3	---	---	---	---	---	---	---	---	---	8.1	8.0	8.0
4	---	---	---	---	---	---	---	---	---	8.1	8.0	8.1
5	---	---	---	---	---	---	8.7	8.5	8.6	8.2	8.1	8.1
6	---	---	---	---	---	---	8.8	8.5	8.7	8.1	7.7	7.9
7	---	---	---	---	---	---	8.6	8.2	8.5	8.0	7.7	7.9
8	---	---	---	---	---	---	8.2	7.8	8.0	8.0	7.9	8.0
9	---	---	---	---	---	---	8.1	7.8	8.0	8.0	7.7	7.9
10	---	---	---	---	---	---	8.3	7.9	8.1	8.1	8.0	8.0
11	---	---	---	---	---	---	8.1	7.9	8.0	8.0	7.7	8.0
12	---	---	---	---	---	---	8.1	7.9	8.0	7.8	7.6	7.7
13	---	---	---	---	---	---	8.2	7.9	8.0	7.9	7.8	7.8
14	---	---	---	---	---	---	8.2	8.0	8.1	8.0	7.9	7.9
15	---	---	---	---	---	---	8.2	8.0	8.1	8.0	7.9	8.0
16	---	---	---	---	---	---	8.2	8.0	8.1	8.0	7.9	8.0
17	---	---	---	---	---	---	8.1	7.9	8.0	8.0	8.0	8.0
18	---	---	---	---	---	---	8.1	7.9	8.0	8.0	8.0	8.0
19	---	---	---	---	---	---	8.0	7.7	7.8	8.0	7.9	8.0
20	---	---	---	---	---	---	7.8	7.7	7.7	8.1	8.0	8.0
21	---	---	---	---	---	---	8.0	7.7	7.8	8.1	8.0	8.0
22	---	---	---	---	---	---	7.9	7.9	7.9	8.2	8.0	8.1
23	---	---	---	---	---	---	7.9	7.9	7.9	8.2	7.9	8.1
24	---	---	---	---	---	---	8.0	7.9	7.9	8.1	7.8	8.0
25	---	---	---	---	---	---	8.0	7.9	8.0	7.9	7.7	7.8
26	---	---	---	---	---	---	8.0	7.9	7.9	7.9	7.8	7.8
27	---	---	---	---	---	---	8.0	7.8	7.9	7.9	7.8	7.9
28	---	---	---	---	---	---	7.9	7.8	7.9	8.0	7.9	7.9
29	---	---	---	---	---	---	8.0	7.9	8.0	8.0	7.9	7.9
30	---	---	---	---	---	---	8.0	7.9	7.9	8.1	7.9	8.0
31	---	---	---	---	---	---	---	---	---	8.1	8.0	8.0
MONTH	---	---	---	---	---	---	---	---	---	8.2	7.6	8.0

## 06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

pH, WH, FIELD, (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.1	8.0	8.1	8.1	7.8	7.9	8.0	7.7	7.8	7.7	7.5	7.6
2	8.2	8.0	8.1	8.1	7.9	8.0	8.1	7.8	7.9	7.6	7.4	7.5
3	8.3	8.1	8.2	8.2	7.9	8.0	8.2	7.9	8.0	7.6	7.4	7.5
4	8.2	7.7	8.1	8.0	7.7	7.9	8.0	7.8	7.9	7.6	7.4	7.5
5	8.0	7.6	7.8	8.0	7.7	7.8	8.0	7.8	7.9	7.6	7.4	7.5
6	8.1	7.9	8.0	8.1	7.8	7.9	7.8	7.7	7.8	7.7	7.4	7.5
7	8.2	7.9	8.0	8.1	7.8	7.9	7.9	7.6	7.7	7.7	7.5	7.6
8	8.2	7.9	8.1	8.0	7.6	7.7	7.9	7.6	7.7	7.6	7.5	7.5
9	8.1	7.8	8.0	7.9	7.6	7.7	7.9	7.7	7.8	7.8	7.5	7.6
10	8.0	7.8	7.9	7.9	7.7	7.8	7.8	7.6	7.7	7.7	7.5	7.6
11	7.9	7.6	7.9	7.9	7.7	7.8	7.8	7.6	7.6	7.7	7.5	7.6
12	7.8	7.6	7.7	7.8	7.6	7.7	7.8	7.5	7.6	7.7	7.5	7.6
13	7.8	7.7	7.8	7.9	7.6	7.8	7.8	7.6	7.7	7.7	7.6	7.6
14	7.9	7.8	7.9	8.0	7.8	7.9	7.7	7.6	7.6	7.6	7.4	7.5
15	8.0	7.9	8.0	8.1	7.8	8.0	7.8	7.7	7.7	7.6	7.4	7.5
16	8.1	8.0	8.0	8.2	7.9	8.1	7.7	7.6	7.7	7.6	7.5	7.5
17	8.2	8.0	8.1	8.3	7.9	8.1	7.7	7.6	7.6	7.6	7.5	7.5
18	8.2	8.1	8.1	8.3	7.9	8.1	7.7	7.6	7.7	7.7	7.5	7.5
19	8.3	8.1	8.2	8.4	7.7	8.0	7.7	7.6	7.7	7.7	7.6	7.6
20	8.4	8.2	8.3	7.9	7.6	7.6	7.7	7.6	7.6	7.6	7.5	7.6
21	8.3	8.2	8.3	7.7	7.6	7.6	7.8	7.6	7.7	7.6	7.5	7.6
22	8.4	8.2	8.3	7.8	7.7	7.8	7.8	7.6	7.7	7.7	7.6	7.6
23	8.4	8.2	8.3	7.9	7.8	7.8	7.9	7.7	7.7	7.7	7.6	7.6
24	8.4	8.2	8.3	8.1	7.8	8.0	7.8	7.6	7.7	7.8	7.6	7.7
25	8.4	8.1	8.2	8.2	8.0	8.1	7.8	7.6	7.7	7.8	7.6	7.7
26	8.3	7.7	8.2	8.3	8.0	8.1	7.9	7.7	7.7	7.7	7.6	7.7
27	7.8	7.6	7.7	8.3	8.0	8.1	7.8	7.7	7.7	7.8	7.6	7.7
28	7.9	7.6	7.7	8.2	7.9	8.0	7.9	7.7	7.8	7.9	7.7	7.7
29	8.0	7.7	7.8	7.9	7.6	7.7	7.8	7.6	7.7	7.9	7.7	7.8
30	8.1	7.8	7.9	7.8	7.6	7.7	7.8	7.6	7.7	7.8	7.6	7.7
31	---	---	---	7.9	7.7	7.7	7.8	7.6	7.7	---	---	---
MONTH	8.4	7.6	8.0	8.4	7.6	7.9	8.2	7.5	7.7	7.9	7.4	7.6

SPECIFIC CONDUCTANCE,  $\mu\text{S}/\text{cm}$  @ 25°C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	887	867	875	963	923	945	921	907	914	---	---	---
2	919	887	896	941	908	923	932	908	926	---	---	---
3	923	897	912	963	929	953	939	915	930	---	---	---
4	923	888	908	968	956	963	927	915	923	---	---	---
5	889	277	435	976	956	969	936	847	915	---	---	---
6	470	393	443	977	961	969	938	878	931	---	---	---
7	588	453	516	985	965	976	950	934	946	---	---	---
8	699	588	636	977	962	971	984	947	970	---	---	---
9	735	699	725	971	941	957	1002	982	997	---	---	---
10	819	637	748	980	958	971	---	---	---	---	---	---
11	701	573	632	975	963	970	---	---	---	---	---	---
12	714	580	656	996	974	989	---	---	---	---	---	---
13	769	714	748	1006	993	999	---	---	---	---	---	---
14	840	769	802	1015	996	1005	---	---	---	---	---	---
15	856	281	617	1001	984	991	---	---	---	---	---	---
16	467	340	387	998	982	990	---	---	---	---	---	---
17	590	467	533	994	986	989	---	---	---	---	---	---
18	691	590	658	993	980	990	---	---	---	---	---	---
19	785	688	726	1002	974	987	---	---	---	---	---	---
20	832	785	811	1001	973	993	---	---	---	---	---	---
21	864	832	850	982	961	973	---	---	---	---	---	---
22	899	859	879	1010	982	1001	---	---	---	---	---	---
23	898	882	889	1001	978	994	---	---	---	---	---	---
24	901	871	881	978	404	566	---	---	---	---	---	---
25	902	881	893	533	467	503	---	---	---	---	---	---
26	894	857	874	684	533	614	---	---	---	---	---	---
27	913	870	904	780	684	737	---	---	---	---	---	---
28	935	903	923	861	778	808	---	---	---	---	---	---
29	947	914	937	894	859	869	---	---	---	---	---	---
30	956	929	947	913	894	909	---	---	---	---	---	---
31	990	946	964	---	---	---	---	---	---	---	---	---
MONTH	990	277	761	1015	404	916	---	---	---	---	---	---

## BLUE RIVER BASIN

06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

SPECIFIC CONDUCTANCE,  $\mu\text{S}/\text{cm}$  @ 25°C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	711	665	688
2	---	---	---	---	---	---	---	---	---	743	698	719
3	---	---	---	---	---	---	---	---	---	779	739	752
4	---	---	---	---	---	---	---	---	---	787	753	774
5	---	---	---	---	---	---	951	882	923	780	753	769
6	---	---	---	---	---	---	925	881	908	865	526	657
7	---	---	---	---	---	---	943	909	931	534	457	482
8	---	---	---	---	---	---	988	642	885	493	373	426
9	---	---	---	---	---	---	642	566	585	414	330	364
10	---	---	---	---	---	---	661	598	634	527	414	472
11	---	---	---	---	---	---	704	661	680	533	276	466
12	---	---	---	---	---	---	776	704	748	362	224	268
13	---	---	---	---	---	---	822	772	796	493	362	439
14	---	---	---	---	---	---	842	822	834	555	491	525
15	---	---	---	---	---	---	871	835	861	587	555	571
16	---	---	---	---	---	---	899	871	888	633	506	568
17	---	---	---	---	---	---	924	899	915	506	472	491
18	---	---	---	---	---	---	929	917	926	487	446	468
19	---	---	---	---	---	---	936	599	767	546	487	517
20	---	---	---	---	---	---	673	349	567	596	545	572
21	---	---	---	---	---	---	462	286	388	637	596	616
22	---	---	---	---	---	---	546	462	503	657	635	644
23	---	---	---	---	---	---	671	546	615	780	655	679
24	---	---	---	---	---	---	700	669	690	766	307	634
25	---	---	---	---	---	---	735	699	714	390	185	281
26	---	---	---	---	---	---	786	735	757	506	389	455
27	---	---	---	---	---	---	766	310	528	594	481	525
28	---	---	---	---	---	---	515	351	433	512	481	494
29	---	---	---	---	---	---	612	515	569	547	505	530
30	---	---	---	---	---	---	666	612	645	590	545	569
31	---	---	---	---	---	---	---	---	---	632	589	602
MONTH	---	---	---	---	---	---	---	---	---	865	185	549
DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	635	621	628	723	652	697	651	529	579	896	871	887
2	645	632	638	765	722	751	747	651	703	923	888	909
3	664	637	645	794	760	782	842	747	795	930	913	922
4	822	644	673	830	545	766	878	792	840	929	890	916
5	674	485	537	684	569	620	886	843	868	909	887	899
6	555	531	545	731	618	699	895	883	889	942	905	930
7	579	555	562	666	594	626	912	887	904	951	935	944
8	641	579	616	794	501	602	909	891	899	950	930	940
9	662	525	636	530	463	488	919	902	909	940	895	914
10	537	519	528	600	443	516	937	909	920	906	883	895
11	547	384	534	636	466	611	941	753	895	947	895	926
12	409	274	325	622	393	514	833	707	766	932	905	923
13	433	340	393	659	467	555	876	238	440	906	888	901
14	517	433	476	775	659	739	520	425	476	1008	638	817
15	579	517	548	779	734	765	604	520	561	638	504	569
16	625	579	603	751	728	740	705	604	646	586	554	564
17	657	625	641	822	750	783	798	705	754	632	573	596
18	692	657	670	839	816	826	794	690	744	784	632	694
19	711	691	699	851	273	710	762	460	589	742	448	550
20	716	698	710	514	355	469	514	471	487	486	448	461
21	731	711	721	457	433	441	600	514	558	560	486	520
22	759	721	746	537	457	506	695	600	642	632	560	595
23	750	723	741	607	537	576	753	695	730	701	632	671
24	777	738	759	701	607	671	801	753	786	803	701	759
25	783	722	756	760	688	734	826	799	813	849	800	822
26	804	404	755	788	736	761	864	797	838	920	822	882
27	516	352	421	804	768	794	865	855	860	946	910	928
28	487	439	464	857	659	796	892	862	883	956	927	938
29	542	487	514	686	357	471	886	869	879	975	937	955
30	652	541	591	521	475	505	886	861	877	983	966	973
31	---	---	---	531	504	513	894	870	885	---	---	---
MONTH	822	274	602	857	273	646	941	238	755	1008	448	807



06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

OXYGEN DISSOLVED, (mg/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.8	7.6	8.4	8.7	6.4	7.4	10.2	8.3	9.5	---	---	---
2	9.8	7.3	8.2	8.5	5.9	7.0	10.0	8.2	9.2	---	---	---
3	9.4	6.7	7.9	8.9	6.1	7.3	8.8	5.7	7.7	---	---	---
4	8.5	6.4	7.4	7.9	5.9	6.7	7.7	5.2	6.5	---	---	---
5	9.5	7.3	8.9	8.4	6.0	6.9	7.5	3.9	6.1	---	---	---
6	9.2	8.8	9.0	8.5	5.7	6.9	7.8	5.2	6.6	---	---	---
7	9.5	8.8	9.0	7.6	5.2	6.3	8.2	5.6	7.2	---	---	---
8	9.4	8.4	8.8	8.2	5.6	6.7	9.1	5.4	7.5	---	---	---
9	9.1	7.7	8.3	9.3	6.6	7.7	10.0	6.4	8.5	---	---	---
10	8.1	7.0	7.4	8.7	7.4	7.9	---	---	---	---	---	---
11	8.4	7.0	7.5	9.5	7.2	8.1	---	---	---	---	---	---
12	8.1	7.1	7.5	9.8	7.3	8.4	---	---	---	---	---	---
13	8.6	7.2	7.7	9.6	6.8	8.0	---	---	---	---	---	---
14	9.1	7.6	8.1	9.2	6.3	7.4	---	---	---	---	---	---
15	10.4	7.4	8.8	8.4	5.1	6.5	---	---	---	---	---	---
16	10.3	9.4	10	8.1	5.1	6.3	---	---	---	---	---	---
17	10.1	9.6	9.9	7.7	4.7	6.1	---	---	---	---	---	---
18	9.7	8.8	9.3	6.4	4.3	5.2	---	---	---	---	---	---
19	9.4	8.5	8.8	8.0	4.7	6.2	---	---	---	---	---	---
20	8.9	7.7	8.4	10.6	6.4	8.6	---	---	---	---	---	---
21	8.1	6.7	7.4	11.1	8.2	9.5	---	---	---	---	---	---
22	7.3	5.7	6.5	10.4	8.0	9.0	---	---	---	---	---	---
23	6.8	5.2	5.8	8.7	7.4	7.9	---	---	---	---	---	---
24	6.9	5.0	5.8	9.0	6.7	8.3	---	---	---	---	---	---
25	8.4	6.0	7.1	8.6	8.1	8.4	---	---	---	---	---	---
26	9.8	7.6	8.5	8.4	7.6	8.0	---	---	---	---	---	---
27	10.3	8.6	9.3	9.1	7.6	8.4	---	---	---	---	---	---
28	10.5	8.6	9.4	9.9	8.4	9.2	---	---	---	---	---	---
29	10.2	7.9	8.8	10.4	7.9	9.6	---	---	---	---	---	---
30	9.8	7.6	8.5	10.0	7.6	9.3	---	---	---	---	---	---
31	9.6	7.1	8.2	---	---	---	---	---	---	---	---	---
MONTH	10.5	5.0	8.2	11.1	4.3	7.6	---	---	---	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	7.9	7.5	7.7
2	---	---	---	---	---	---	---	---	---	8.9	7.2	8.2
3	---	---	---	---	---	---	---	---	---	9.3	8.0	8.5
4	---	---	---	---	---	---	---	---	---	9.2	7.8	8.5
5	---	---	---	---	---	---	13.6	10.9	12.1	9.0	7.6	8.2
6	---	---	---	---	---	---	12.7	10.2	11.2	7.7	3.2	7.0
7	---	---	---	---	---	---	10.2	9.1	9.5	7.8	6.6	7.5
8	---	---	---	---	---	---	9.8	8.8	9.2	8.5	7.6	8.0
9	---	---	---	---	---	---	10.6	9.4	10	8.5	7.1	8.1
10	---	---	---	---	---	---	11.0	9.1	9.8	9.0	8.3	8.7
11	---	---	---	---	---	---	9.9	8.3	9.1	8.6	7.1	8.3
12	---	---	---	---	---	---	10.0	8.0	8.7	8.4	6.9	7.7
13	---	---	---	---	---	---	10.7	8.1	9.4	9.1	8.3	8.6
14	---	---	---	---	---	---	10.6	8.3	9.5	8.8	8.0	8.4
15	---	---	---	---	---	---	10.0	7.5	8.7	8.6	7.5	8.2
16	---	---	---	---	---	---	8.8	6.5	7.8	8.2	7.1	7.7
17	---	---	---	---	---	---	9.2	6.8	7.9	8.7	7.5	8.3
18	---	---	---	---	---	---	7.9	6.5	7.2	9.2	8.5	8.8
19	---	---	---	---	---	---	7.3	5.8	6.5	9.1	8.2	8.7
20	---	---	---	---	---	---	8.5	5.5	6.9	9.2	8.4	8.8
21	---	---	---	---	---	---	9.8	0.3	7.4	9.6	8.6	9.0
22	---	---	---	---	---	---	9.2	7.9	8.8	9.5	8.5	8.9
23	---	---	---	---	---	---	8.1	7.0	7.7	8.6	7.4	8.2
24	---	---	---	---	---	---	7.7	6.8	7.2	9.1	7.8	8.4
25	---	---	---	---	---	---	8.5	7.4	7.9	9.3	8.7	8.8
26	---	---	---	---	---	---	8.2	7.4	7.7	9.0	8.2	8.8
27	---	---	---	---	---	---	9.6	7.2	8.6	8.4	7.9	8.2
28	---	---	---	---	---	---	9.1	8.3	8.8	8.6	7.9	8.2
29	---	---	---	---	---	---	9.0	7.9	8.5	8.6	7.6	8.1
30	---	---	---	---	---	---	8.3	7.7	8.0	8.7	7.4	7.9
31	---	---	---	---	---	---	---	---	---	8.6	7.0	7.8
MONTH	---	---	---	---	---	---	---	---	---	9.6	3.2	8.3

## BLUE RIVER BASIN

06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

OXYGEN DISSOLVED, (mg/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	8.9	6.8	7.7	8.4	5.4	6.7	7.8	5.5	6.4	8.7	5.8	7.1
2	8.9	6.6	7.5	8.3	5.6	6.9	8.2	5.6	6.6	8.6	5.6	6.8
3	9.1	6.3	7.6	8.6	6.1	7.2	8.4	6.0	6.9	8.4	5.2	6.6
4	8.3	6.5	7.1	7.4	6.0	6.6	7.2	5.6	6.3	8.5	5.3	6.7
5	8.8	6.8	7.5	7.9	6.2	6.9	8.0	5.5	6.6	8.1	5.4	6.6
6	9.2	7.1	7.9	8.4	5.8	6.9	7.1	5.4	6.2	7.8	5.4	6.4
7	9.6	7.0	8.0	8.2	5.7	6.8	8.7	6.0	7.2	7.6	5.4	6.3
8	9.9	6.7	8.0	6.7	5.7	6.3	9.6	6.4	7.8	7.6	5.3	6.3
9	8.4	6.5	7.1	6.9	5.4	6.0	9.5	7.1	8.0	7.8	5.5	6.4
10	8.4	6.7	7.3	7.4	5.5	6.3	7.8	6.3	7.0	7.7	5.7	6.5
11	7.4	6.4	6.9	7.4	5.8	6.5	---	---	e5.9	7.8	5.9	6.6
12	7.3	6.8	7.0	6.9	6.1	6.5	---	---	e5.8	8.2	6.2	7.0
13	7.2	6.8	7.0	7.7	5.9	6.8	---	---	e7.0	8.1	6.4	7.1
14	7.8	7.1	7.5	8.2	6.4	7.1	---	---	e6.5	7.2	6.4	6.7
15	8.2	7.4	7.7	8.4	6.2	7.2	---	---	e6.4	7.6	6.5	7.2
16	8.5	7.3	7.8	8.8	6.2	7.4	---	---	e6.6	7.7	6.7	7.2
17	8.8	7.2	7.9	8.8	6.1	7.3	6.8	5.9	6.3	7.6	6.7	7.0
18	8.9	6.9	7.8	8.8	5.9	7.2	7.4	6.6	6.9	7.2	6.5	6.9
19	10.1	7.1	8.3	9.2	5.9	7.1	7.2	6.4	6.8	7.7	6.8	7.4
20	10.0	6.8	8.2	6.5	5.7	6.3	7.2	6.4	6.7	7.9	7.4	7.6
21	9.6	6.4	7.8	6.4	5.6	5.9	7.1	6.0	6.5	8.2	7.4	7.7
22	9.7	6.0	7.6	6.7	5.5	6.0	7.4	5.9	6.5	8.5	7.4	7.8
23	9.9	6.0	7.7	7.6	6.0	6.6	7.5	5.5	6.5	9.0	7.8	8.3
24	9.7	6.1	7.7	8.0	6.2	7.0	7.1	5.7	6.3	9.3	7.3	8.4
25	9.7	6.2	7.6	8.3	6.2	7.1	7.9	6.1	6.8	9.3	7.8	8.4
26	8.7	5.8	7.0	8.3	5.9	7.0	8.0	6.1	6.9	9.1	7.6	8.2
27	7.3	5.9	6.7	8.3	5.7	6.8	7.9	6.0	6.8	8.9	7.3	7.9
28	7.5	5.5	6.4	8.1	5.5	6.5	8.3	6.0	7.0	9.1	7.2	7.9
29	7.9	4.9	6.4	7.1	6.1	6.7	8.3	6.0	7.0	8.9	6.9	7.7
30	8.0	5.2	6.5	7.1	5.8	6.3	8.6	6.0	7.1	8.7	6.6	7.5
31	---	---	---	7.2	5.5	6.2	8.9	6.0	7.2	---	---	---
MONTH	10.1	4.9	7.4	9.2	5.4	6.7	9.6	5.0	6.7	9.3	5.2	7.2

TURBIDITY, (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	11	6.0	8.4	7.0	3.0	4.9	7.0	4.0	4.9	---	---	---
2	29	5.0	8.1	6.0	4.0	4.6	9.0	4.0	5.5	---	---	---
3	10	4.0	6.5	6.0	4.0	4.9	17	5.0	7.0	---	---	---
4	11	5.0	7.2	7.0	4.0	5.1	20	5.0	7.0	---	---	---
5	900	10	290	7.0	3.0	5.1	71	4.0	16	---	---	---
6	300	83	140	7.0	3.0	4.8	24	5.0	8.8	---	---	---
7	84	27	56	8.0	4.0	5.5	8.0	4.0	5.5	---	---	---
8	27	16	20	9.0	4.0	5.5	13	4.0	5.6	---	---	---
9	19	12	15	6.0	3.0	4.8	11	4.0	4.8	---	---	---
10	55	12	23	6.0	3.0	3.7	---	---	---	---	---	---
11	31	13	19	6.0	4.0	4.7	---	---	---	---	---	---
12	35	9.0	17	10	4.0	5.8	---	---	---	---	---	---
13	60	12	26	6.0	4.0	4.9	---	---	---	---	---	---
14	---	---	e29	8.0	3.0	4.7	---	---	---	---	---	---
15	---	---	e220	10	3.0	4.1	---	---	---	---	---	---
16	---	---	e260	15	3.0	4.7	---	---	---	---	---	---
17	---	---	e62	8.0	4.0	5.1	---	---	---	---	---	---
18	---	---	e27	9.0	4.0	5.3	---	---	---	---	---	---
19	---	---	e15	11	4.0	6.2	---	---	---	---	---	---
20	12	7.0	9.1	6.0	3.0	3.7	---	---	---	---	---	---
21	14	7.0	8.8	5.0	2.0	3.2	---	---	---	---	---	---
22	---	---	e9.6	5.0	3.0	3.4	---	---	---	---	---	---
23	---	---	e9.1	8.0	3.0	4.3	---	---	---	---	---	---
24	---	---	e8.2	1400	6.0	270	---	---	---	---	---	---
25	---	---	e7.9	150	38	76	---	---	---	---	---	---
26	---	---	e7.1	39	14	24	---	---	---	---	---	---
27	---	---	e7.2	16	6.0	9.2	---	---	---	---	---	---
28	---	---	e6.9	16	4.0	5.5	---	---	---	---	---	---
29	---	---	e6.5	12	5.0	8.4	---	---	---	---	---	---
30	8.0	4.0	5.5	9.0	4.0	4.8	---	---	---	---	---	---
31	7.0	3.0	4.9	---	---	---	---	---	---	---	---	---
MONTH	1100	3.0	43	1400	2.0	17	---	---	---	---	---	---

06893500 BLUE RIVER NEAR KANSAS CITY, MO--Continued

TURBIDITY, (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	56	37	44
2	---	---	---	---	---	---	---	---	---	60	30	41
3	---	---	---	---	---	---	---	---	---	31	22	26
4	---	---	---	---	---	---	---	---	---	26	20	22
5	---	---	---	---	---	---	18	11	14	28	15	20
6	---	---	---	---	---	---	20	12	16	250	15	93
7	---	---	---	---	---	---	21	14	16	460	91	240
8	---	---	---	---	---	---	270	16	99	1500	190	400
9	---	---	---	---	---	---	210	63	100	1500	180	620
10	---	---	---	---	---	---	67	29	43	180	65	100
11	---	---	---	---	---	---	42	22	31	2700	60	420
12	---	---	---	---	---	---	28	18	23	2700	330	910
13	---	---	---	---	---	---	25	12	16	340	100	180
14	---	---	---	---	---	---	18	11	14	110	54	75
15	---	---	---	---	---	---	20	8.8	13	55	40	48
16	---	---	---	---	---	---	17	11	13	200	37	77
17	---	---	---	---	---	---	18	8.1	13	110	52	70
18	---	---	---	---	---	---	21	11	15	100	49	68
19	---	---	---	---	---	---	780	16	240	51	34	42
20	---	---	---	---	---	---	1400	110	350	35	22	29
21	---	---	---	---	---	---	1400	170	1100	26	18	23
22	---	---	---	---	---	---	700	120	280	31	16	21
23	---	---	---	---	---	---	120	58	79	74	15	24
24	---	---	---	---	---	---	59	43	51	950	26	87
25	---	---	---	---	---	---	54	36	43	1400	220	750
26	---	---	---	---	---	---	44	33	37	220	68	120
27	---	---	---	---	---	---	1400	39	720	100	50	69
28	---	---	---	---	---	---	1200	130	400	53	30	44
29	---	---	---	---	---	---	140	65	91	40	26	33
30	---	---	---	---	---	---	70	51	57	30	21	26
31	---	---	---	---	---	---	---	---	---	23	15	20
MONTH	---	---	---	---	---	---	---	---	---	2700	15	150

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	20	13	16	32	13	20	52	10	20	17	6.0	9.4
2	22	10	13	37	14	20	23	14	18	13	6.0	9.2
3	13	8.0	10	33	12	19	48	11	18	24	7.0	9.9
4	140	7.0	27	190	13	40	42	16	26	15	7.0	10
5	120	24	50	74	27	47	23	13	17	15	8.0	11
6	27	11	18	40	16	21	25	12	16	32	8.0	12
7	21	9.0	14	25	15	19	23	12	16	20	9.0	12
8	20	7.0	12	290	22	120	27	9.0	15	22	9.0	13
9	330	9.0	46	58	35	46	24	12	16	27	11	15
10	75	18	32	79	20	37	22	10	16	20	12	15
11	1100	11	55	600	18	60	110	11	32	21	11	15
12	1500	430	790	1300	34	150	48	16	26	20	11	15
13	560	110	200	57	19	36	1400	18	630	20	10	15
14	110	62	84	57	14	27	280	52	130	470	12	70
15	65	37	51	32	11	22	57	29	44	150	19	60
16	51	23	33	33	9.0	19	44	18	29	43	14	24
17	30	17	23	51	9.0	19	40	20	28	46	13	24
18	19	11	15	37	9.0	18	26	15	21	45	16	26
19	16	9.0	12	1500	8.0	330	330	15	91	1300	30	140
20	25	8.0	11	1500	200	350	58	18	41	73	24	44
21	17	7.0	11	210	91	150	26	11	18	34	19	22
22	17	7.0	11	96	41	62	31	8.0	15	30	12	18
23	32	8.0	12	58	31	40	17	7.0	12	19	12	16
24	19	9.0	13	47	22	31	27	7.0	11	20	8.0	14
25	23	8.0	14	130	13	24	17	7.0	12	14	9.0	11
26	730	8.0	95	150	10	23	15	7.0	11	14	7.0	10
27	620	100	250	24	10	16	18	7.0	11	13	7.0	9.0
28	110	33	59	100	9.0	30	16	7.0	11	12	6.0	8.1
29	42	17	28	1500	79	270	28	6.0	12	11	4.0	7.0
30	41	15	22	80	24	45	34	6.0	11	11	4.0	6.7
31	---	---	---	40	19	27	14	6.0	8.9	---	---	---
MONTH	1500	7.0	68	1500	8.0	69	1400	6.0	45	1300	4.0	22

e Estimated

## BLUE RIVER BASIN

06893557 BRUSH CREEK AT WARD PARKWAY IN KANSAS CITY, MO

LOCATION.--Lat 39°01'59", long 94°36'19", in NW ¼ NW ¼ sec.31, T.49 N., R.33 W. in Jackson County, Hydrologic Unit 10300101, on the downstream side of the right wingwall on Ward Parkway at Shawnee Mission Parkway in Kansas City and 5.4 mi upstream from the Blue River.

DRAINAGE AREA.--12.2 mi<sup>2</sup>.

PERIOD OF RECORD--July 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 800.00 ft above National Geodetic Vertical Datum of 1929 (from levels by the U.S. Geological Survey).

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	1.1	0.40	e0.00	13	1.8	0.32	2.5	1.5	0.56	0.62	0.26
2	1.0	1.2	0.40	e0.00	e12	5.6	0.39	2.0	1.2	1.4	0.47	0.23
3	1.0	1.0	0.43	e0.00	e3.5	2.1	0.38	1.6	1.3	12	0.49	0.16
4	15	1.1	0.69	e0.00	e2.7	2.2	0.39	1.4	14	28	0.48	0.15
5	104	1.6	1.9	e0.00	2.0	2.7	0.45	1.6	4.0	3.5	0.36	0.27
6	3.7	1.0	1.4	e0.00	1.8	2.0	0.51	107	0.97	1.9	0.77	0.39
7	2.2	0.87	0.39	e0.00	1.6	1.7	1.8	49	0.80	2.9	0.49	0.23
8	1.6	0.92	0.36	e0.00	1.8	1.9	45	75	0.76	1.6	0.35	0.54
9	1.4	1.1	0.39	e0.10	1.9	36	4.1	28	19	0.53	0.35	0.24
10	38	0.86	0.40	e0.20	1.3	1.1	0.77	6.3	2.7	1.7	0.53	0.82
11	3.0	0.75	0.40	e0.35	0.87	0.95	0.59	63	30	4.5	1.5	0.24
12	1.9	1.0	37	e0.35	0.83	0.75	1.6	66	20	6.3	1.8	0.07
13	1.6	0.95	4.0	e0.20	0.78	0.90	0.53	13	1.9	1.2	75	0.07
14	1.3	0.93	0.68	e0.15	0.65	0.96	0.45	5.4	1.5	0.54	1.4	4.2
15	90	1.3	0.53	e0.10	0.61	0.72	0.46	3.8	1.2	0.51	0.56	2.9
16	4.5	1.4	0.56	e0.20	0.54	0.61	0.45	21	0.83	0.90	0.44	0.25
17	2.1	1.1	0.66	e0.10	0.47	0.56	0.49	17	0.71	0.86	6.8	0.55
18	1.6	10	0.66	e0.05	0.50	0.57	0.47	2.9	0.78	0.56	2.2	2.9
19	1.4	3.8	0.80	e1.0	68	0.55	31	2.1	0.72	9.1	21	36
20	0.97	0.50	1.0	e0.70	7.2	0.84	127	1.8	0.66	1.9	7.5	1.7
21	0.93	0.48	1.0	0.59	1.8	1.4	240	1.5	0.72	0.51	0.59	0.50
22	1.2	0.48	1.0	0.42	1.1	0.64	12	1.3	0.65	0.39	0.85	0.19
23	4.9	16	1.1	0.52	0.91	0.75	4.7	19	0.55	0.44	e7.0	0.12
24	2.0	63	e0.80	0.36	0.80	0.82	3.9	45	0.53	0.50	0.69	0.19
25	1.0	1.7	e0.65	0.24	0.82	4.2	2.2	97	0.50	0.46	0.43	0.15
26	0.57	0.66	e0.50	0.22	1.1	0.63	3.5	4.4	30	1.9	0.35	0.19
27	0.57	0.44	e0.40	0.27	0.98	0.49	110	24	3.5	0.44	0.28	0.17
28	0.57	0.44	e0.30	0.34	1.2	12	9.6	3.8	0.79	14	0.25	0.15
29	0.59	0.44	e0.20	1.9	---	0.76	4.2	2.5	0.62	28	0.22	0.13
30	0.64	0.44	e0.10	56	---	0.41	3.0	3.1	2.3	1.1	0.22	0.16
31	0.72	---	e0.10	66	---	0.34	---	1.8	---	0.50	0.23	---
MEAN	9.39	3.88	1.91	4.20	4.67	2.80	20.3	21.7	4.82	4.15	4.33	1.80
MAX	104	63	37	66	68	36	240	107	30	28	75	36
MIN	0.57	0.44	0.10	0.00	0.47	0.34	0.32	1.3	0.50	0.39	0.22	0.07
IN.	0.89	0.35	0.18	0.40	0.40	0.26	1.86	2.05	0.44	0.39	0.41	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

MEAN	28.4	9.79	4.07	4.63	8.32	7.68	22.5	18.8	26.1	6.78	6.22	8.83
MAX	87.6	25.5	8.84	8.00	20.6	14.3	41.8	23.2	55.0	12.8	10.3	15.0
(WY)	1999	1999	1999	1999	2001	2001	1999	1999	2001	2000	2000	1999
MIN	1.64	2.71	0.48	0.41	2.71	2.80	1.15	7.32	4.82	2.46	3.46	1.80
(WY)	2000	2000	2001	2000	2000	2002	2000	2000	2002	1999	1999	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1998 - 2002	
ANNUAL MEAN	15.2		7.02		12.7	
HIGHEST ANNUAL MEAN					21.3	
LOWEST ANNUAL MEAN					6.59	
HIGHEST DAILY MEAN	427	Jun 6	240	Apr 21	1520	Oct 4 1998
LOWEST DAILY MEAN	0.10	Dec 30,31	0.00	Jan 1-8	0.00	Jul 15 1998,
						Jan 1-8 2002
ANNUAL SEVEN-DAY MINIMUM	0.26	Aug 3	0.00	Jan 1	0.00	Jul 15 1998,
						Jan 1 2002
MAXIMUM PEAK FLOW	---		4330	Apr 21	4710	Jun 6 2001
MAXIMUM PEAK STAGE	---		44.06	Apr 21	50.90	Oct 4 1998
INSTANTANEOUS LOW FLOW	---		0.00	Jan 1-8	0.00	Jan 1-8 2002
ANNUAL RUNOFF (INCHES)	16.90		7.79		14.09	
10 PERCENT EXCEEDS	38		15		25	
50 PERCENT EXCEEDS	1.8		0.91		1.4	
90 PERCENT EXCEEDS	0.41		0.23		0.39	

e Estimated

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO

LOCATION.--Lat 39°02'21", long 94°34'43", in NW ¼ SE ¼ sec.29, T.49 N., R.33 W., Jackson County, Hydrologic Unit 10300101, on the left upstream Rockhill Road bridge abutment and 3.7 mi upstream from the Blue River.

DRAINAGE AREA.--17.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 799.70 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Geological Survey).

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. U.S.G.S satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.97	3.0	7.1	0.00	7.9	e4.0	0.32	4.0	e1.9	0.86	e1.5	0.72
2	0.57	2.7	6.0	0.00	6.5	e10	0.33	4.6	e1.5	1.4	0.54	0.64
3	0.48	3.2	4.1	0.00	5.6	e4.6	2.0	4.1	e2.0	7.6	0.74	0.43
4	21	3.4	2.2	0.00	4.2	e2.2	2.6	4.1	e15	25	0.63	0.56
5	154	4.3	1.5	e0.00	2.6	e5.6	2.6	9.2	e4.0	3.1	0.60	0.70
6	13	4.0	3.1	e0.00	2.3	e4.4	1.8	161	1.6	2.2	0.76	0.79
7	9.3	3.4	2.1	0.00	3.9	e2.0	4.1	59	1.2	2.8	0.64	0.78
8	6.2	2.9	2.3	0.00	3.4	e4.5	52	104	1.1	2.7	0.43	0.88
9	3.8	4.5	3.8	0.00	2.4	29	10	35	41	2.3	0.32	0.64
10	34	5.8	4.0	0.00	2.8	2.1	4.6	9.7	2.3	3.7	0.74	0.92
11	1.6	7.7	3.6	0.00	3.2	7.4	3.6	98	36	2.4	1.4	0.93
12	1.8	6.0	34	0.00	2.6	2.4	3.7	84	19	6.1	0.95	0.51
13	2.5	5.7	5.5	0.00	2.3	e1.6	2.3	21	2.0	2.3	103	0.76
14	3.0	5.3	2.6	0.27	1.9	e1.0	1.7	11	1.6	1.7	1.9	3.0
15	144	4.1	2.8	0.52	1.4	e0.80	1.1	e9.0	1.6	1.5	1.5	2.3
16	30	2.6	2.8	0.77	1.2	e0.70	e1.4	e23	1.2	1.8	1.4	0.64
17	22	2.0	3.3	0.64	0.90	e0.60	e1.1	e20	1.1	1.8	5.9	0.79
18	13	7.5	3.7	0.62	0.75	e0.60	0.67	e9.0	1.4	1.8	2.2	2.5
19	9.1	8.1	3.5	1.8	e70	e0.60	52	e7.0	1.2	4.7	20	28
20	6.8	2.5	4.4	e2.3	e13	e0.90	199	e5.0	1.3	2.1	5.7	1.8
21	4.2	1.0	4.2	e2.0	e4.0	e1.5	320	e4.0	1.2	1.1	0.89	1.2
22	3.3	0.83	e3.0	e1.8	e2.0	e0.70	8.5	1.7	0.94	0.93	1.0	0.56
23	4.8	14	e2.2	e1.9	e1.0	e0.80	3.3	25	0.85	e0.85	6.7	0.66
24	1.8	46	e2.0	e1.7	e0.90	e0.80	2.4	64	0.84	e0.97	1.0	0.81
25	2.9	7.1	e2.0	e1.5	e0.90	e5.5	2.0	134	0.69	e0.85	0.85	0.83
26	3.5	4.5	e2.0	e1.4	e1.5	4.6	3.9	3.8	45	e2.1	0.76	0.89
27	5.1	5.0	e1.0	e1.5	e1.2	2.6	158	24	3.5	e0.85	0.80	0.85
28	4.5	7.7	0.82	e1.6	e1.2	11	11	3.5	1.4	e15	0.69	0.95
29	3.6	6.0	0.75	e4.2	---	2.2	6.5	e3.0	1.1	e30	0.48	0.99
30	2.5	6.1	0.42	56	---	1.3	4.7	e3.0	1.9	e3.0	0.68	0.45
31	3.3	---	0.21	65	---	0.78	---	e2.5	---	e2.0	0.72	---
MEAN	16.7	6.23	3.90	4.69	5.41	3.77	28.9	30.6	6.51	4.37	5.34	1.88
MAX	154	46	34	65	70	29	320	161	45	30	103	28
MIN	0.48	0.83	0.21	0.00	0.75	0.60	0.32	1.7	0.69	0.85	0.32	0.43
IN.	1.13	0.41	0.26	0.32	0.33	0.26	1.90	2.08	0.43	0.30	0.36	0.12

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

MEAN	45.5	14.4	5.65	6.49	9.68	9.81	32.6	22.1	36.4	8.69	8.69	16.2
MAX	145	41.4	10.9	11.4	18.0	18.0	69.1	30.7	73.8	17.1	11.0	39.8
(WY)	1999	1999	1999	1999	2001	1999	1999	2002	2001	2000	2000	1998
MIN	3.45	4.91	0.76	2.93	5.41	3.77	2.65	11.7	6.51	3.08	5.34	1.88
(WY)	2000	2001	2001	2000	2002	2002	2000	2000	2002	1999	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1998 - 2002		
ANNUAL MEAN	18.0			9.89			17.5		
HIGHEST ANNUAL MEAN							32.9		
LOWEST ANNUAL MEAN							9.68		
HIGHEST DAILY MEAN	570			320			2540		
LOWEST DAILY MEAN	0.00			0.00			0.00		
ANNUAL SEVEN-DAY MINIMUM	0.41			0.00			0.00		
MAXIMUM PEAK FLOW	---			4070			21700 <sup>a</sup>		
MAXIMUM PEAK STAGE	---			10.25			21.71 <sup>b</sup>		
INSTANTANEOUS LOW FLOW	---			0.00			0.00		
ANNUAL RUNOFF (INCHES)	14.33			7.89			13.97		
10 PERCENT EXCEEDS	35			20			29		
50 PERCENT EXCEEDS	2.7			2.3			3.3		
90 PERCENT EXCEEDS	0.56			0.64			0.80		

e Estimated

a Discharge determined by indirect method.

b From floodmark.

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1998 to current year.

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE FROM PRESSURE TRANSDUCER (PT).--July 1998 to May 14, 2002.(discontinued)

WATER TEMPERATURE.--July 1998 to current year.

pH.--July 1998 to current year.

SPECIFIC CONDUCTANCE.--August 1998 to current year.

DISSOLVED OXYGEN.--July 1998 to current year.

TURBIDITY.--July 1998 to current year.

INSTRUMENTATION.--Water-quality monitor seasonally since August 1998. Electronic data logger with 15 minute recording interval and 4 hour satellite transmission interval. The monitor is not operated during the winter months. Pressure transducer with temperature sensor, July 1998 to May 2002.

REMARKS.--The number of missing days of record exceeds 20 percent of the year. The monitor was not operated from Dec. 7 to April 22. Unpublished records prior to October 2000 are available in files of the Sub-district office. Interruptions in the record are generally due to malfunction or fouling of the sensors, where possible missing record has been estimated. Daily value estimations were based on partial data, inspection of contiguous data, hydrograph comparison, comparison with data from station 06893500, and the best judgment of the hydrographer. Detailed records of the procedures employed for estimating data and/or data shifts for specific periods of record have been included with the station analysis and are kept on file. The manufacturers' specified range for turbidity sensors used is 0 to 1000 NTU. All values beyond this limit may be considered as >1000 NTU. Values >1000 NTU are maintained for continuity of the record. Specific Conductance records were rated either good or excellent except for the following periods: May 6 rated poor; May 15-21 and July 29-August 1 rated poor-estimated. pH records were rated either good or excellent except for the following periods: June 12-26 rated fair, May 15-21 and July 29-August 1 rated poor-estimated. Water temperature records were rated either good or excellent except for the following periods: May 15-21 and July 29-August 1 rated poor-estimated. Temperature from pressure transducer not rated except for the following period: April 16-17 rated poor-estimated. Dissolved oxygen records were rated poor except for the following periods: October 11-December 7, April 22 - May 5, May 7-12, 22-24, June 5-11, 27 - July 5, August 2-22, September 17-30 rated either good or excellent; May 13-21 and July 29-August 1 rated poor-estimated. Turbidity records were rated excellent except for the following periods: May 12-14, June 12-26 rated poor, May 15-21, June 2-4, July 29-August 1, and August 22-September 16 rated poor-estimated.

EXTREMES FOR PERIOD OF DAILY RECORD.--(more than 20 percent of record missing)

WATER TEMPERATURE FROM PRESSURE TRANSDUCER.--Maximum recorded, 31.5 °C August 3, 2001.

WATER TEMPERATURE.--Maximum recorded, 36.5 °C, Aug. 31, 2000.

pH.--Maximum recorded, 9.8 standard units, Aug. 28, 2001; minimum recorded, 5.5 standard units, Nov. 6, 2000.

SPECIFIC CONDUCTANCE.--Maximum recorded, 1,410 microsiemens per centimeter (µS/cm), July 6-7, 1999; minimum recorded, 84 µS/cm, Aug. 25, 2001.

DISSOLVED OXYGEN.--Maximum recorded, 23.3 mg/L, June 26, 2001; minimum recorded, 0.0 mg/L, several days 1999, July 23, 2002.

TURBIDITY.--Maximum recorded, 2,300 NTU, Sept. 13, 1998; minimum recorded, 0.0 NTU, many days 1998-2002.

EXTREMES FOR CURRENT YEAR.--(more than 20 percent of record missing)

WATER TEMPERATURE FROM PRESSURE TRANSDUCER.--Maximum, 22.2 °C, April 18.

WATER TEMPERATURE.--Maximum, 34.8 °C, July 20.

pH.--Maximum recorded, 9.7 standard units, June 29 and July 7; minimum recorded, 7.0 standard units, several days.

SPECIFIC CONDUCTANCE.--Maximum recorded, 910 µS/cm, April 27; minimum recorded, 103 µS/cm, May 25.

DISSOLVED OXYGEN.--Maximum recorded, 22.5 mg/L, Oct. 1; minimum recorded, 0.0 mg/L, July 23.

TURBIDITY.--Maximum recorded, 1,500 NTU, Aug. 18; minimum recorded, 0.0 NTU, many days.

## WATER TEMPERATURE FROM PT, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	19.4	18.0	18.6	14.6	13.3	13.8	5.1	4.7	4.9	5.0	4.6	4.8
2	20.2	18.5	19.1	15.1	14.1	14.5	6.1	4.7	5.3	5.0	4.7	4.9
3	20.1	18.6	19.3	14.6	14.0	14.2	7.3	5.6	6.4	5.0	4.7	4.8
4	20.1	15.7	19.4	14.5	14.2	14.3	8.9	7.0	8.1	5.3	4.8	5.1
5	17.7	12.7	13.4	14.5	14.1	14.2	11.5	8.5	9.8	5.3	5.1	5.2
6	14.1	12.4	13.2	14.5	14.0	14.3	10.8	9.8	10.3	5.2	5.0	5.1
7	13.9	13.0	13.6	15.5	14.3	14.8	10.1	9.3	9.6	5.5	5.1	5.3
8	15.4	13.9	14.5	15.3	13.7	14.6	9.3	7.9	8.5	5.7	5.4	5.5
9	16.3	15.1	15.6	13.7	12.5	12.9	7.9	7.0	7.4	5.9	5.7	5.8
10	18.1	16.2	17.5	12.7	11.7	12.2	7.1	6.4	6.7	6.1	5.9	6.0
11	18.1	17.2	17.6	12.4	11.4	12.0	6.7	6.0	6.4	6.4	6.1	6.2
12	17.5	16.4	16.8	11.9	11.4	11.6	7.5	5.9	6.6	6.3	5.0	5.8
13	16.8	16.0	16.3	12.0	11.4	11.6	7.4	7.1	7.2	5.8	5.0	5.5
14	16.2	15.0	15.5	12.9	12.0	12.3	7.4	6.9	7.2	5.6	4.0	4.6
15	15.3	9.7	12.5	14.3	12.6	13.4	6.9	6.4	6.7	5.0	3.6	4.2
16	10.7	8.9	9.7	14.1	13.6	13.8	7.1	6.7	6.8	4.4	3.6	4.0
17	10.5	9.7	10.1	14.0	13.8	13.9	7.1	6.5	6.8	4.7	3.4	4.0
18	12.1	10.5	11.2	14.3	13.9	14.0	6.8	6.2	6.4	5.0	3.8	4.3
19	12.0	11.3	11.6	14.0	11.8	12.7	6.5	5.5	6.0	5.0	4.0	4.4
20	12.9	11.4	11.9	11.8	10.5	11.1	5.5	4.9	5.2	5.3	5.0	5.1
21	13.9	12.7	13.0	10.5	9.4	9.8	5.5	4.9	5.2	5.7	5.1	5.3
22	15.1	13.3	14.1	9.9	9.1	9.5	6.0	5.2	5.6	5.9	5.3	5.6
23	15.8	14.4	15.2	11.3	9.7	10.1	5.2	3.3	4.1	5.7	5.1	5.4
24	16.6	15.3	16.0	11.8	10.4	11.4	3.3	1.4	2.3	5.4	4.5	5.0
25	15.3	12.8	13.7	10.8	10.0	10.4	2.7	1.3	1.8	5.5	4.5	5.1
26	12.8	11.7	12.1	10.9	9.8	10.4	3.8	2.6	3.1	5.5	4.0	4.7
27	11.7	10.5	11.0	9.8	7.3	8.4	4.1	2.6	3.7	6.4	4.8	5.5
28	12.0	10.3	11.0	7.3	5.7	6.3	4.6	4.1	4.5	6.3	5.7	6.0
29	11.9	11.1	11.5	5.7	5.2	5.4	4.5	4.1	4.3	5.8	4.6	5.1
30	13.0	11.9	12.3	5.4	5.1	5.2	4.7	4.2	4.4	5.2	0.2	4.2
31	13.4	12.6	12.9	---	---	---	4.8	4.3	4.6	2.8	0.5	1.8
MONTH	20.2	8.9	14.2	15.5	5.1	11.8	11.5	1.3	6.0	6.4	0.2	5.0

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

WATER TEMPERATURE FROM PT, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY				MARCH			APRIL			MAY		
1	5.0	2.8	3.6	4.4	2.5	3.5	14.1	11.3	12.6	17.7	16.3	16.9
2	3.9	3.3	3.6	4.1	-0.3	1.3	14.0	12.4	13.2	16.3	15.2	15.8
3	4.3	3.4	3.8	6.2	-0.5	2.6	12.4	10.2	10.8	17.3	15.2	16.2
4	4.1	3.2	3.7	8.0	2.3	5.1	10.7	9.6	10.0	17.1	16.0	16.5
5	4.2	3.6	4.1	8.3	5.1	6.2	11.6	9.8	10.3	20.5	17.0	18.0
6	4.4	3.6	4.3	9.0	4.4	6.2	12.6	10.8	11.8	20.6	17.3	18.5
7	3.8	2.7	3.3	8.4	6.2	7.2	12.4	11.5	11.9	19.5	18.3	18.7
8	4.8	3.3	4.0	11.0	7.7	9.4	11.7	11.2	11.4	18.6	16.8	17.5
9	5.4	4.5	4.9	10.9	6.9	7.9	11.9	10.7	11.1	18.3	16.4	17.4
10	5.1	4.1	4.6	7.2	6.0	6.6	12.9	11.3	11.8	17.4	15.6	16.4
11	4.8	3.2	4.0	7.1	6.5	6.8	14.3	12.0	12.7	18.6	14.8	15.8
12	4.8	3.8	4.3	7.4	6.5	7.0	14.5	13.7	14.1	18.4	15.1	16.9
13	5.2	4.0	4.6	8.4	7.1	7.7	15.6	14.0	14.7	16.7	14.0	15.2
14	5.5	4.1	5.0	11.3	8.0	9.7	18.1	14.3	15.5	16.6	15.1	15.9
15	5.9	4.7	5.3	10.5	9.4	9.8	17.7	16.7	17.2	---	---	---
16	6.3	5.0	5.6	9.6	8.3	8.8	---	---	e17.7	---	---	---
17	6.7	5.4	6.1	9.9	7.6	8.5	---	---	e18.7	---	---	---
18	7.1	6.0	6.5	9.6	9.0	9.2	22.2	18.5	19.9	---	---	---
19	10.6	7.0	8.6	9.4	8.8	9.1	22.0	17.3	18.6	---	---	---
20	10.6	9.4	10.0	10.7	8.4	9.3	17.4	12.2	16.1	---	---	---
21	12.4	6.3	9.1	10.3	7.2	8.6	13.7	10.6	12.4	---	---	---
22	13.4	4.0	8.5	7.3	5.2	6.4	14.7	12.9	13.6	---	---	---
23	14.9	4.7	9.5	9.3	5.7	7.2	15.0	14.1	14.5	---	---	---
24	14.8	6.8	10.4	8.5	7.5	8.1	17.5	14.5	16.0	---	---	---
25	10.0	3.0	5.9	7.5	5.3	6.3	17.1	15.4	16.3	---	---	---
26	3.0	-0.4	0.9	7.2	4.6	5.7	16.7	15.1	15.8	---	---	---
27	6.0	-0.3	2.2	8.5	6.4	7.3	15.1	12.3	13.9	---	---	---
28	7.8	1.8	4.2	8.7	7.9	8.3	15.1	13.3	14.0	---	---	---
29	---	---	---	12.0	8.3	9.3	14.7	14.1	14.3	---	---	---
30	---	---	---	12.0	9.3	10.3	17.8	14.4	15.8	---	---	---
31	---	---	---	13.2	10.3	11.5	---	---	---	---	---	---
MONTH	14.9	-0.4	5.4	13.2	-0.5	7.4	---	---	14.2	---	---	---
e Estimated												

e Estimated

WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	21.2	18.3	19.6	15.7	13.7	14.7	7.8	4.8	5.9	---	---	---
2	21.0	18.6	19.9	16.3	14.5	15.1	7.6	4.8	6.2	---	---	---
3	21.9	18.9	20.2	17.7	14.4	15.4	9.1	6.7	7.7	---	---	---
4	20.8	15.9	19.9	17.0	14.9	15.5	12.4	8.6	10.2	---	---	---
5	18.1	13.1	14.0	16.8	14.5	15.2	12.6	11.2	11.9	---	---	---
6	15.5	12.7	13.8	17.7	14.3	15.8	11.5	10.3	10.9	---	---	---
7	16.6	13.4	14.8	17.6	15.4	16.4	---	---	---	---	---	---
8	16.1	14.3	15.2	16.2	13.3	14.9	---	---	---	---	---	---
9	17.3	15.5	16.2	14.0	12.1	13.2	---	---	---	---	---	---
10	19.4	17.0	18.1	14.0	11.8	12.9	---	---	---	---	---	---
11	19.3	17.4	18.1	13.6	11.5	12.5	---	---	---	---	---	---
12	17.7	16.7	17.1	13.0	11.3	12.2	---	---	---	---	---	---
13	17.4	16.4	16.8	13.9	11.8	12.7	---	---	---	---	---	---
14	16.5	15.4	15.9	14.9	12.6	13.7	---	---	---	---	---	---
15	15.6	10.1	12.8	15.4	13.6	14.5	---	---	---	---	---	---
16	11.9	9.4	10.4	16.4	13.9	15.1	---	---	---	---	---	---
17	14.2	10.0	11.6	15.3	13.9	14.7	---	---	---	---	---	---
18	13.0	11.1	12.0	14.9	14.2	14.6	---	---	---	---	---	---
19	14.3	11.7	12.7	14.3	11.5	12.9	---	---	---	---	---	---
20	15.8	11.7	13.3	12.1	10.2	11.2	---	---	---	---	---	---
21	16.6	14.1	15.2	10.9	9.4	10.3	---	---	---	---	---	---
22	17.6	15.4	16.3	11.8	9.3	10.4	---	---	---	---	---	---
23	19.7	16.6	17.9	11.9	10.2	10.6	---	---	---	---	---	---
24	18.4	15.6	16.9	12.2	10.8	11.8	---	---	---	---	---	---
25	15.6	13.0	14.1	12.6	10.3	11.2	---	---	---	---	---	---
26	13.0	11.9	12.5	12.0	10.2	10.9	---	---	---	---	---	---
27	13.1	10.8	11.7	10.2	7.6	8.8	---	---	---	---	---	---
28	13.1	10.7	11.8	7.7	5.8	6.6	---	---	---	---	---	---
29	14.9	11.6	12.9	5.8	5.4	5.6	---	---	---	---	---	---
30	15.6	12.6	13.6	5.9	5.4	5.6	---	---	---	---	---	---
31	14.4	13.0	13.6	---	---	---	---	---	---	---	---	---
MONTH	21.9	9.4	15.1	17.7	5.4	12.5	---	---	---	---	---	---

## BLUE RIVER BASIN

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	18.0	16.6	17.3
2	---	---	---	---	---	---	---	---	---	17.8	15.5	16.6
3	---	---	---	---	---	---	---	---	---	17.7	15.5	16.6
4	---	---	---	---	---	---	---	---	---	20.5	16.2	18.0
5	---	---	---	---	---	---	---	---	---	22.3	17.9	19.7
6	---	---	---	---	---	---	---	---	---	20.9	17.7	19.4
7	---	---	---	---	---	---	---	---	---	20.6	18.6	19.5
8	---	---	---	---	---	---	---	---	---	19.5	17.1	18.4
9	---	---	---	---	---	---	---	---	---	19.3	16.7	18.1
10	---	---	---	---	---	---	---	---	---	17.7	15.9	16.8
11	---	---	---	---	---	---	---	---	---	19.1	15.2	16.6
12	---	---	---	---	---	---	---	---	---	18.8	15.4	17.2
13	---	---	---	---	---	---	---	---	---	17.9	14.3	16.1
14	---	---	---	---	---	---	---	---	---	22.7	15.5	18.4
15	---	---	---	---	---	---	---	---	---	---	---	e19.3
16	---	---	---	---	---	---	---	---	---	---	---	e19.8
17	---	---	---	---	---	---	---	---	---	---	---	e19.0
18	---	---	---	---	---	---	---	---	---	---	---	e17.8
19	---	---	---	---	---	---	---	---	---	---	---	e18.0
20	---	---	---	---	---	---	---	---	---	---	---	e18.3
21	---	---	---	---	---	---	---	---	---	---	---	e18.9
22	---	---	---	---	---	---	---	---	---	22.9	18.4	20.0
23	---	---	---	---	---	---	20.9	14.9	17.8	20.6	19.5	19.8
24	---	---	---	---	---	---	19.4	17.1	18.1	20.6	17.1	19.3
25	---	---	---	---	---	---	17.7	15.8	16.8	20.2	15.4	17.4
26	---	---	---	---	---	---	17.0	15.4	16.1	22.4	17.0	19.6
27	---	---	---	---	---	---	15.4	12.6	14.3	24.4	18.8	21.8
28	---	---	---	---	---	---	17.5	13.7	15.3	24.4	21.1	22.5
29	---	---	---	---	---	---	20.7	14.7	16.9	26.4	21.9	23.9
30	---	---	---	---	---	---	18.4	16.4	17.4	28.6	23.4	25.7
31	---	---	---	---	---	---	---	---	---	29.5	24.9	26.9
MONTH	---	---	---	---	---	---	---	---	---	---	---	19.2

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	29.5	26.1	27.8	30.2	27.9	29.1	---	---	e31.8	29.9	26.0	27.8
2	31.0	26.7	28.6	29.1	27.5	28.3	31.3	28.8	30.1	29.3	26.6	27.9
3	30.6	26.6	28.4	30.9	26.9	28.2	32.9	28.6	30.4	28.4	26.8	27.6
4	28.2	25.4	26.7	29.7	26.4	27.6	32.5	29.5	30.9	28.4	25.9	26.9
5	26.5	24.1	24.9	31.3	25.6	28.1	33.8	29.8	31.4	31.0	26.2	27.8
6	26.5	22.8	24.5	32.2	27.4	29.4	31.4	29.1	30.1	31.1	26.9	28.4
7	26.8	23.6	25.2	33.5	28.5	30.3	29.6	27.7	28.7	29.8	27.0	28.4
8	27.4	24.6	26.0	33.0	28.6	30.8	28.9	26.2	27.6	29.9	27.2	28.6
9	26.4	24.4	25.3	34.1	29.5	31.7	29.8	26.1	27.7	29.4	27.4	28.4
10	26.1	23.9	24.9	32.2	29.4	30.8	28.0	26.4	27.2	28.9	27.1	27.9
11	27.0	24.8	25.6	33.3	28.2	30.0	31.0	26.4	28.3	27.3	25.4	26.3
12	31.1	24.6	27.1	30.0	27.8	28.5	28.2	26.6	27.2	26.0	24.2	25.0
13	27.8	25.2	26.2	28.0	26.4	27.2	26.9	22.5	23.5	25.4	23.4	24.3
14	25.4	23.5	24.6	28.9	25.9	27.4	28.7	21.9	24.4	24.3	23.6	24.0
15	26.1	23.4	24.6	29.6	26.4	28.0	28.1	23.6	25.6	25.8	22.8	24.0
16	27.0	23.4	25.1	30.7	27.0	28.8	27.6	25.9	26.8	26.5	22.7	24.2
17	28.4	23.7	25.7	32.4	27.7	29.8	27.3	25.1	25.9	24.8	23.4	23.9
18	26.0	24.1	24.8	31.9	28.6	30.2	28.5	24.4	25.9	26.4	23.3	24.6
19	28.1	23.7	25.6	34.4	29.0	30.4	27.2	24.8	26.0	24.8	22.0	23.1
20	30.0	25.4	27.2	34.8	28.3	31.0	27.0	23.8	25.4	23.5	21.3	22.3
21	30.1	26.3	28.0	33.1	29.2	31.1	27.9	26.0	26.9	24.6	21.6	22.9
22	31.5	26.9	29.1	32.2	29.4	30.6	29.1	26.3	27.5	23.3	21.2	22.1
23	30.9	27.3	28.9	30.9	28.0	29.3	30.2	26.3	28.2	21.6	20.1	21.0
24	30.8	27.3	28.9	30.8	27.8	29.3	28.5	26.7	27.4	21.0	19.1	20.1
25	32.0	27.8	29.7	31.7	27.9	29.8	29.3	26.0	27.3	21.7	19.2	20.3
26	33.4	26.0	29.4	33.3	28.8	30.6	29.8	26.3	27.8	22.5	19.8	21.1
27	32.1	25.1	27.5	31.4	28.9	30.3	28.3	26.5	27.4	23.6	20.2	21.5
28	29.3	25.9	27.7	30.9	26.6	29.4	28.5	26.1	27.2	23.6	20.3	21.7
29	32.8	27.5	29.9	---	---	e28.6	28.0	26.2	27.0	24.4	21.6	22.7
30	31.0	28.0	29.6	---	---	e30.0	28.0	25.7	26.7	24.0	21.8	23.0
31	---	---	---	---	---	e31.6	28.1	25.4	26.7	---	---	---
MONTH	33.4	22.8	26.9	---	---	29.6	---	---	27.6	31.1	19.1	24.6

e Estimated



pH, WH, FIELD, (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## BLUE RIVER BASIN

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

pH, WH, FIELD, (STANDARD UNITS), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	8.7	7.6	8.1	9.1	7.6	8.6	---	---	e8.5	8.5	7.7	8.1
2	8.3	7.5	7.9	8.7	7.2	7.6	8.4	7.2	7.6	8.5	7.8	8.1
3	8.2	7.4	7.7	7.8	7.2	7.4	8.0	7.2	7.5	8.0	7.7	7.9
4	7.7	7.4	7.5	7.7	7.1	7.3	8.3	7.3	7.7	8.0	7.6	7.7
5	7.6	7.3	7.4	8.0	7.0	7.3	8.4	7.2	7.7	8.4	7.6	7.9
6	7.6	7.3	7.4	9.3	7.1	8.1	7.8	7.3	7.5	8.6	7.7	8.0
7	7.7	7.3	7.5	9.7	8.6	9.2	8.0	7.2	7.5	8.8	7.8	8.2
8	8.0	7.4	7.7	9.5	8.4	9.1	8.5	7.3	7.8	8.7	7.8	8.2
9	7.8	7.1	7.5	9.3	7.7	8.8	8.4	7.5	7.9	8.5	7.8	8.1
10	7.2	7.0	7.1	8.9	7.3	8.4	8.3	7.4	7.8	8.6	7.7	8.0
11	7.5	7.1	7.2	8.6	7.0	7.6	8.4	7.3	7.7	8.7	7.8	8.1
12	7.7	7.2	7.4	8.0	7.2	7.5	7.4	7.3	7.3	8.9	7.9	8.2
13	8.6	7.2	7.5	8.3	7.2	7.6	7.9	7.2	7.4	8.8	8.1	8.3
14	8.3	7.1	7.4	9.0	7.3	8.1	7.2	7.1	7.1	8.2	7.8	8.0
15	8.9	7.2	7.9	9.3	7.7	8.8	7.6	7.1	7.3	8.5	7.8	7.9
16	9.3	7.5	8.5	9.1	8.3	8.8	8.8	7.1	7.8	8.8	7.8	8.1
17	9.3	7.8	8.7	9.1	7.9	8.7	8.8	7.1	7.6	8.6	7.5	8.1
18	9.2	7.9	8.6	9.1	8.1	8.7	8.1	7.1	7.4	8.7	7.6	8.1
19	9.2	7.6	8.5	8.9	7.4	8.4	7.8	7.2	7.5	8.0	7.2	7.5
20	9.3	8.0	8.7	8.9	7.4	8.1	7.6	7.1	7.2	7.4	7.2	7.2
21	9.1	8.0	8.6	8.8	8.0	8.6	7.7	7.1	7.3	7.5	7.1	7.3
22	9.1	8.0	8.6	8.5	7.4	8.0	8.3	7.2	7.5	7.6	7.2	7.3
23	9.2	7.9	8.6	8.2	7.3	7.6	8.6	7.2	7.7	7.9	7.3	7.5
24	9.1	8.1	8.6	8.2	7.3	7.6	7.7	7.2	7.4	8.4	7.5	7.8
25	9.2	8.0	8.6	7.8	7.4	7.6	8.3	7.2	7.6	8.6	7.6	8.1
26	8.9	7.4	8.3	7.9	7.4	7.6	8.6	7.4	8.0	9.2	8.0	8.6
27	7.4	7.0	7.2	8.6	7.4	7.9	8.5	7.5	7.9	9.2	8.4	8.8
28	7.4	7.0	7.2	8.5	7.2	7.8	8.2	7.4	7.7	9.0	8.2	8.6
29	9.7	7.1	8.2	---	---	e7.2	8.1	7.4	7.6	8.9	8.3	8.6
30	9.4	7.8	8.9	---	---	e7.3	8.8	7.5	7.9	8.7	8.1	8.5
31	---	---	---	---	---	e8.2	9.0	7.7	8.2	---	---	---
MONTH	9.7	7.0	8.0	---	---	8.0	---	---	7.6	9.2	7.1	8.0

e Estimated

SPECIFIC CONDUCTANCE, in  $\mu\text{S}/\text{cm}$  @ 25°C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	393	331	375	640	568	590	234	226	230	---	---	---
2	381	338	363	609	586	595	241	232	237	---	---	---
3	370	347	360	617	574	603	259	240	245	---	---	---
4	391	215	372	626	597	616	274	252	260	---	---	---
5	411	124	186	638	616	627	294	263	280	---	---	---
6	212	190	198	662	628	646	308	269	295	---	---	---
7	225	209	216	662	626	648	---	---	---	---	---	---
8	249	225	234	659	636	652	---	---	---	---	---	---
9	261	242	250	669	621	657	---	---	---	---	---	---
10	391	180	327	682	652	671	---	---	---	---	---	---
11	357	338	349	692	665	682	---	---	---	---	---	---
12	340	331	336	695	654	687	---	---	---	---	---	---
13	335	329	333	706	680	700	---	---	---	---	---	---
14	333	321	330	714	694	707	---	---	---	---	---	---
15	339	115	238	721	659	711	---	---	---	---	---	---
16	180	140	162	725	668	719	---	---	---	---	---	---
17	212	180	189	731	721	725	---	---	---	---	---	---
18	226	204	214	737	719	730	---	---	---	---	---	---
19	250	223	232	763	711	750	---	---	---	---	---	---
20	273	243	257	763	756	759	---	---	---	---	---	---
21	295	253	278	768	734	756	---	---	---	---	---	---
22	329	288	304	773	764	768	---	---	---	---	---	---
23	385	303	341	770	564	763	---	---	---	---	---	---
24	413	374	397	689	181	265	---	---	---	---	---	---
25	452	402	432	196	182	188	---	---	---	---	---	---
26	477	447	461	194	188	191	---	---	---	---	---	---
27	503	463	480	202	193	197	---	---	---	---	---	---
28	511	462	494	211	202	206	---	---	---	---	---	---
29	532	507	522	221	211	216	---	---	---	---	---	---
30	562	526	537	226	218	221	---	---	---	---	---	---
31	592	551	566	---	---	---	---	---	---	---	---	---
MONTH	592	115	333	773	181	575	---	---	---	---	---	---

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

SPECIFIC CONDUCTANCE, in  $\mu\text{S}/\text{cm}$  @ 25°C, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	FEBRUARY			MARCH			APRIL			MAY		
1	---	---	---	---	---	---	---	---	---	689	633	662
2	---	---	---	---	---	---	---	---	---	718	688	701
3	---	---	---	---	---	---	---	---	---	753	717	738
4	---	---	---	---	---	---	---	---	---	783	753	765
5	---	---	---	---	---	---	---	---	---	799	524	788
6	---	---	---	---	---	---	---	---	---	748	162	266
7	---	---	---	---	---	---	---	---	---	399	157	320
8	---	---	---	---	---	---	---	---	---	483	228	313
9	---	---	---	---	---	---	---	---	---	586	372	442
10	---	---	---	---	---	---	---	---	---	467	369	410
11	---	---	---	---	---	---	---	---	---	685	179	496
12	---	---	---	---	---	---	---	---	---	441	242	377
13	---	---	---	---	---	---	---	---	---	692	441	579
14	---	---	---	---	---	---	---	---	---	804	692	756
15	---	---	---	---	---	---	---	---	---	---	---	e814
16	---	---	---	---	---	---	---	---	---	---	---	e686
17	---	---	---	---	---	---	---	---	---	---	---	e560
18	---	---	---	---	---	---	---	---	---	---	---	e440
19	---	---	---	---	---	---	---	---	---	---	---	e444
20	---	---	---	---	---	---	---	---	---	---	---	e451
21	---	---	---	---	---	---	---	---	---	---	---	e454
22	---	---	---	---	---	---	---	---	---	457	380	425
23	---	---	---	---	---	---	820	763	791	584	266	429
24	---	---	---	---	---	---	854	817	841	582	195	529
25	---	---	---	---	---	---	879	853	864	375	103	242
26	---	---	---	---	---	---	901	879	893	440	373	410
27	---	---	---	---	---	---	910	128	501	567	334	500
28	---	---	---	---	---	---	446	276	370	505	428	461
29	---	---	---	---	---	---	568	438	485	494	474	488
30	---	---	---	---	---	---	635	563	601	499	456	487
31	---	---	---	---	---	---	---	---	---	484	390	454
MONTH	---	---	---	---	---	---	---	---	---	---	---	512

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	JUNE			JULY			AUGUST			SEPTEMBER		
1	464	413	450	363	342	356	---	---	e374	415	385	402
2	499	449	478	379	341	372	405	386	398	424	400	414
3	516	498	506	399	356	382	418	404	410	435	414	423
4	592	516	539	514	257	394	425	390	417	445	428	436
5	684	592	640	260	220	240	432	403	426	451	420	441
6	695	678	687	221	203	215	457	403	444	462	448	455
7	683	666	678	227	196	217	463	451	458	466	442	459
8	670	647	660	241	222	232	458	445	452	479	463	469
9	651	204	480	274	229	261	457	450	454	493	474	480
10	309	221	268	303	268	284	464	455	458	503	487	493
11	373	198	328	325	300	309	470	433	464	513	497	505
12	311	163	181	403	322	382	449	433	445	520	507	514
13	213	173	192	437	401	416	451	136	200	530	518	523
14	250	213	230	459	433	442	212	178	196	569	524	536
15	281	246	268	457	427	446	229	210	218	568	554	559
16	292	270	284	455	433	443	242	222	230	582	557	567
17	307	237	284	462	444	456	311	237	266	592	582	586
18	318	282	307	473	441	463	338	305	316	617	587	598
19	333	286	325	497	463	473	460	252	405	683	417	524
20	346	308	337	507	473	499	422	279	321	419	337	373
21	381	342	359	512	493	504	337	323	330	346	336	342
22	396	370	385	531	501	517	341	331	336	353	343	350
23	415	380	394	535	502	527	343	282	311	361	351	355
24	434	402	416	539	531	534	328	307	315	368	361	365
25	449	427	436	552	521	540	350	327	336	369	366	368
26	455	187	427	554	543	549	359	345	351	373	362	368
27	359	336	347	555	546	552	381	355	367	377	359	368
28	355	317	345	561	219	482	392	374	383	370	358	363
29	354	316	345	---	---	e384	401	388	394	366	355	360
30	349	308	339	---	---	e375	415	396	402	387	359	374
31	---	---	---	---	---	e376	417	385	407	---	---	---
MONTH	695	163	397	---	---	407	---	---	364	683	336	446

e Estimated

## BLUE RIVER BASIN

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

OXYGEN DISSOLVED, (mg/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
1	22.5	7.3	14.5	11.4	6.1	9.0	1.4	0.2	0.4	---	---	---
2	19.4	6.7	14.7	14.4	4.8	9.1	3.8	0.3	1.3	---	---	---
3	17.4	9.7	14.1	17.7	3.4	9.7	4.2	0.3	2.4	---	---	---
4	11.6	3.6	9.0	17.6	4.1	9.5	5.0	1.1	3.6	---	---	---
5	10.1	4.3	8.9	16.6	2.8	8.1	5.7	0.4	4.1	---	---	---
6	8.1	2.1	5.8	17.2	5.0	10.6	3.1	0.4	1.0	---	---	---
7	8.0	1.7	4.9	19.7	6.4	13.0	---	---	---	---	---	---
8	9.1	2.1	5.6	15.7	4.9	11.3	---	---	---	---	---	---
9	9.0	4.3	7.1	13.8	4.2	8.4	---	---	---	---	---	---
10	8.6	1.0	5.9	11.5	3.6	7.0	---	---	---	---	---	---
11	2.8	0.5	1.4	13.5	1.1	7.0	---	---	---	---	---	---
12	1.4	0.3	0.6	11.8	1.6	5.6	---	---	---	---	---	---
13	3.8	0.2	1.7	11.0	1.1	6.8	---	---	---	---	---	---
14	4.3	0.3	2.4	11.4	1.5	6.5	---	---	---	---	---	---
15	10.2	0.2	6.0	10.6	0.9	5.3	---	---	---	---	---	---
16	9.1	1.4	7.5	5.7	1.3	2.6	---	---	---	---	---	---
17	7.4	0.5	4.9	8.0	0.8	2.8	---	---	---	---	---	---
18	7.4	3.5	6.1	7.8	0.6	3.7	---	---	---	---	---	---
19	7.1	0.2	4.3	11.0	2.6	7.5	---	---	---	---	---	---
20	8.6	0.5	4.8	10.5	1.4	5.9	---	---	---	---	---	---
21	7.1	1.1	5.2	11.6	3.5	8.4	---	---	---	---	---	---
22	8.8	2.7	6.6	12.4	3.0	8.4	---	---	---	---	---	---
23	6.3	2.0	3.9	10.0	6.9	8.1	---	---	---	---	---	---
24	6.2	1.1	4.1	10.0	4.9	7.8	---	---	---	---	---	---
25	7.0	2.9	5.2	6.3	0.1	3.0	---	---	---	---	---	---
26	7.2	2.4	5.0	2.8	1.3	2.1	---	---	---	---	---	---
27	8.1	2.3	5.1	3.8	2.8	3.3	---	---	---	---	---	---
28	9.7	3.5	7.2	3.6	0.6	2.7	---	---	---	---	---	---
29	9.6	5.3	7.1	1.9	0.2	0.6	---	---	---	---	---	---
30	11.9	3.2	7.8	2.8	0.3	1.2	---	---	---	---	---	---
31	11.2	7.5	9.2	---	---	---	---	---	---	---	---	---
MONTH	22.5	0.2	6.3	19.7	0.1	6.5	---	---	---	---	---	---

DAY	MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN		MAX	MIN	MEAN
	FEBRUARY				MARCH				APRIL				MAY		
1	---	---	---		---	---	---		---	---	---		5.0	2.2	3.7
2	---	---	---		---	---	---		---	---	---		8.0	4.9	6.3
3	---	---	---		---	---	---		---	---	---		8.8	4.1	7.5
4	---	---	---		---	---	---		---	---	---		10.2	6.7	8.4
5	---	---	---		---	---	---		---	---	---		12.3	7.4	10.1
6	---	---	---		---	---	---		---	---	---		10.6	6.9	8.4
7	---	---	---		---	---	---		---	---	---		8.6	5.8	7.4
8	---	---	---		---	---	---		---	---	---		8.3	5.0	7.0
9	---	---	---		---	---	---		---	---	---		6.0	2.4	4.8
10	---	---	---		---	---	---		---	---	---		4.2	1.3	2.9
11	---	---	---		---	---	---		---	---	---		5.8	0.9	3.2
12	---	---	---		---	---	---		---	---	---		7.7	2.0	5.8
13	---	---	---		---	---	---		---	---	---		7.5	2.4	e5.2
14	---	---	---		---	---	---		---	---	---		6.1	4.0	e4.3
15	---	---	---		---	---	---		---	---	---		---	---	e3.6
16	---	---	---		---	---	---		---	---	---		---	---	e3.0
17	---	---	---		---	---	---		---	---	---		---	---	e5.1
18	---	---	---		---	---	---		---	---	---		---	---	e7.3
19	---	---	---		---	---	---		---	---	---		---	---	e9.2
20	---	---	---		---	---	---		---	---	---		---	---	e11.4
21	---	---	---		---	---	---		---	---	---		---	---	e14.0
22	---	---	---		---	---	---		---	---	---		21.8	12.4	16.9
23	---	---	---		---	---	---		9.5	8.5	9.0		17.6	6.8	12.5
24	---	---	---		---	---	---		8.6	3.4	6.5		8.9	2.9	4.9
25	---	---	---		---	---	---		3.4	2.4	2.7		9.5	6.2	8.2
26	---	---	---		---	---	---		6.2	3.0	5.1		7.0	4.8	6.2
27	---	---	---		---	---	---		10.7	5.9	9.0		8.1	5.0	6.7
28	---	---	---		---	---	---		9.2	6.2	8.2		7.8	4.9	6.5
29	---	---	---		---	---	---		6.5	5.2	5.8		9.7	5.0	7.2
30	---	---	---		---	---	---		5.2	2.5	4.2		16.8	6.3	10.8
31	---	---	---		---	---	---		---	---	---		22.0	9.1	15.2
MONTH	---	---	---		---	---	---		---	---	---		---	---	7.5

## 06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

## OXYGEN DISSOLVED, (mg/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	16.6	9.3	12.8	14.6	5.5	10.9	---	---	e8.7	14.8	6.1	10.1
2	12.5	5.2	8.7	10.9	2.4	5.5	8.8	1.2	4.9	11.6	3.6	8.2
3	8.8	3.2	5.6	7.1	0.8	3.9	7.4	0.8	4.1	9.5	3.2	6.5
4	5.8	2.9	4.3	6.6	0.9	3.6	9.0	1.2	4.9	9.7	2.3	5.6
5	5.8	1.6	3.2	8.0	0.1	3.3	10.0	0.2	4.5	12.7	3.2	7.1
6	5.2	1.6	3.3	15.3	1.4	7.8	6.3	1.4	3.4	11.6	3.8	7.8
7	6.9	2.2	4.7	16.8	7.5	11.6	6.1	0.4	2.4	13.2	2.1	7.2
8	9.1	3.8	6.3	13.4	2.4	9.5	7.5	1.0	3.4	13.0	2.1	7.3
9	7.4	2.8	5.5	14.5	1.6	10.4	7.9	1.5	4.5	10.9	3.0	6.3
10	3.0	0.8	1.9	11.3	2.8	8.2	9.4	2.1	5.5	11.8	2.2	5.7
11	6.6	0.8	2.9	11.1	1.0	4.5	8.5	0.4	3.9	13.8	3.5	7.3
12	6.2	3.3	5.0	11.1	1.3	5.6	2.2	0.1	0.6	14.9	3.2	8.2
13	9.4	2.5	4.9	13.8	2.5	7.3	6.8	0.1	1.7	14.4	3.6	8.7
14	9.8	1.7	4.9	18.4	3.0	9.8	2.7	0.1	0.8	7.5	2.8	4.4
15	12.8	1.9	7.2	15.8	6.9	13.1	5.8	0.3	2.7	11.8	3.0	5.4
16	17.3	4.3	11.0	13.9	10.3	12.3	11.9	0.6	6.1	13.5	3.3	7.6
17	17.3	4.5	11.4	12.6	4.8	10.7	11.4	0.8	5.5	11.4	3.7	8.4
18	16.6	7.9	11.8	13.4	5.8	9.5	9.3	0.3	3.8	12.6	4.5	7.9
19	16.4	3.9	11.0	10.5	0.9	6.3	8.0	1.1	5.2	6.9	3.2	5.1
20	15.2	6.5	11.2	8.7	0.2	3.8	6.0	0.1	3.0	5.0	2.3	3.4
21	13.6	7.3	10.5	8.3	2.1	5.4	7.6	0.8	4.0	6.1	2.4	4.1
22	12.4	5.8	9.3	9.3	1.2	4.7	11.6	1.3	5.6	6.7	3.3	4.7
23	13.7	5.3	9.4	7.5	0.0	2.8	13.0	0.3	6.5	8.5	4.1	6.2
24	13.2	5.4	8.9	8.1	0.6	3.7	8.7	1.6	3.7	11.0	6.2	7.9
25	13.2	5.8	9.2	6.6	1.1	4.3	10.8	0.6	5.1	12.6	6.8	9.2
26	12.5	3.2	7.5	6.9	1.2	4.1	13.3	1.4	7.7	19.6	8.7	12.6
27	3.6	0.1	0.7	13.2	1.8	7.3	11.1	2.9	7.2	18.1	10.4	13.9
28	4.2	0.1	1.7	11.2	0.7	5.8	10.5	2.0	5.7	17.2	11.7	14.2
29	21.8	1.2	9.3	---	---	e1.4	9.2	1.9	4.9	15.6	11.3	13.5
30	18.5	6.6	13.2	---	---	e2.7	13.8	1.9	6.1	13.0	7.2	10.9
31	---	---	---	---	---	e8.8	20.5	3.8	9.7	---	---	---
MONTH	21.8	0.1	7.2	---	---	6.7	---	---	4.7	19.6	2.1	7.8

e Estimated

## TURBIDITY, (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	18	0.0	5.5	7.0	1.0	4.9	63	29	35	---	---	---
2	16	1.0	6.5	6.0	0.0	2.7	65	27	33	---	---	---
3	11	1.0	6.5	4.0	0.0	1.7	35	26	31	---	---	---
4	150	0.0	13	9.0	0.0	1.7	35	24	28	---	---	---
5	200	16	54	4.0	0.0	1.3	50	21	30	---	---	---
6	21	9.0	16	7.0	0.0	2.2	38	19	29	---	---	---
7	18	4.0	11	12	1.0	3.4	---	---	---	---	---	---
8	16	2.0	7.7	14	1.0	7.1	---	---	---	---	---	---
9	7.0	3.0	4.8	9.0	1.0	4.6	---	---	---	---	---	---
10	87	3.0	33	12	0.0	3.7	---	---	---	---	---	---
11	25	10	18	16	1.0	5.5	---	---	---	---	---	---
12	12	5.0	6.6	16	1.0	5.9	---	---	---	---	---	---
13	17	3.0	5.4	17	1.0	5.5	---	---	---	---	---	---
14	9.0	2.0	5.6	20	0.0	5.4	---	---	---	---	---	---
15	130	2.0	41	9.0	0.0	2.9	---	---	---	---	---	---
16	48	17	37	27	0.0	3.7	---	---	---	---	---	---
17	34	15	25	19	0.0	3.2	---	---	---	---	---	---
18	28	13	22	18	0.0	4.7	---	---	---	---	---	---
19	17	6.0	10	21	1.0	11	---	---	---	---	---	---
20	10	4.0	6.5	14	1.0	6.7	---	---	---	---	---	---
21	27	3.0	4.2	18	4.0	9.3	---	---	---	---	---	---
22	21	2.0	4.7	11	1.0	6.4	---	---	---	---	---	---
23	46	5.0	13	67	4.0	8.2	---	---	---	---	---	---
24	15	2.0	6.3	320	24	220	---	---	---	---	---	---
25	130	2.0	7.7	220	110	160	---	---	---	---	---	---
26	7.0	1.0	3.8	140	83	110	---	---	---	---	---	---
27	4.0	0.0	2.2	89	65	75	---	---	---	---	---	---
28	9.0	2.0	4.4	66	46	57	---	---	---	---	---	---
29	9.0	1.0	3.4	74	39	44	---	---	---	---	---	---
30	14	0.0	3.6	54	36	41	---	---	---	---	---	---
31	21	4.0	6.7	---	---	---	---	---	---	---	---	---
MONTH	200	0.0	13	320	0.0	27	---	---	---	---	---	---

## BLUE RIVER BASIN

06893562 BRUSH CREEK AT ROCKHILL ROAD IN KANSAS CITY, MO--Continued

TURBIDITY, (NTU), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
FEBRUARY			MARCH			APRIL			MAY			
1	---	---	---	---	---	---	---	---	---	110	21	54
2	---	---	---	---	---	---	---	---	---	94	14	53
3	---	---	---	---	---	---	---	---	---	21	7.0	13
4	---	---	---	---	---	---	---	---	---	12	6.0	8.7
5	---	---	---	---	---	---	---	---	---	81	6.0	10
6	---	---	---	---	---	---	---	---	---	160	22	83
7	---	---	---	---	---	---	---	---	---	120	28	42
8	---	---	---	---	---	---	---	---	---	47	22	38
9	---	---	---	---	---	---	---	---	---	39	17	26
10	---	---	---	---	---	---	---	---	---	27	9.0	18
11	---	---	---	---	---	---	---	---	---	160	7.0	32
12	---	---	---	---	---	---	---	---	---	71	28	47
13	---	---	---	---	---	---	---	---	---	29	14	20
14	---	---	---	---	---	---	---	---	---	25	1.0	10
15	---	---	---	---	---	---	---	---	---	---	---	e2.6
16	---	---	---	---	---	---	---	---	---	---	---	e34
17	---	---	---	---	---	---	---	---	---	---	---	e30
18	---	---	---	---	---	---	---	---	---	---	---	e30
19	---	---	---	---	---	---	---	---	---	---	---	e15
20	---	---	---	---	---	---	---	---	---	---	---	e12
21	---	---	---	---	---	---	---	---	---	---	---	e9.0
22	---	---	---	---	---	---	---	---	---	22	10	14
23	---	---	---	---	---	---	28	18	20	96	11	20
24	---	---	---	---	---	---	26	13	18	300	15	33
25	---	---	---	---	---	---	14	2.0	5.5	420	29	64
26	---	---	---	---	---	---	7.0	2.0	3.8	32	20	27
27	---	---	---	---	---	---	320	4.0	83	42	6.0	16
28	---	---	---	---	---	---	72	36	50	35	2.0	4.2
29	---	---	---	---	---	---	51	31	36	5.0	1.0	2.5
30	---	---	---	---	---	---	180	29	59	48	2.0	7.0
31	---	---	---	---	---	---	---	---	---	37	5.0	11
MONTH	---	---	---	---	---	---	---	---	---	---	---	25

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	16	6.0	9.9	13	3.0	6.3	---	---	e4.0	---	---	e10
2	---	---	e9.0	21	1.0	4.2	10	2.0	5.3	---	---	e10
3	---	---	e8.0	10	0.0	2.8	12	2.0	4.4	---	---	e10
4	---	---	e7.0	23	0.0	8.2	13	2.0	3.9	---	---	e10
5	14	2.0	6.1	14	0.0	4.9	33	1.0	4.9	---	---	e10
6	15	1.0	3.0	14	1.0	3.4	14	2.0	6.1	---	---	e10
7	12	2.0	3.7	13	2.0	5.2	21	3.0	7.0	---	---	e10
8	12	2.0	3.6	10	3.0	6.1	18	3.0	7.4	---	---	e10
9	170	2.0	19	20	5.0	8.7	15	3.0	6.3	---	---	e10
10	29	3.0	15	21	5.0	11	22	4.0	6.6	---	---	e10
11	170	1.0	11	24	5.0	13	19	3.0	7.1	---	---	e10
12	160	10	45	14	2.0	7.3	28	5.0	14	---	---	e10
13	18	6.7	11	17	6.0	10	660	11	110	---	---	e10
14	10	5.2	6.9	19	7.0	11	80	21	37	---	---	e12
15	21	2.6	5.4	31	7.0	16	61	16	26	---	---	e11
16	12	4.0	6.4	46	10	18	77	26	42	---	---	e10
17	20	5.2	9.5	23	13	17	500	48	150	30	6.0	10
18	26	5.8	9.4	25	9.0	17	1500	0.0	150	29	5.0	12
19	27	7.2	12	25	7.0	15	68	0.0	22	40	7.0	15
20	19	5.9	9.9	33	5.0	12	34	15	21	19	5.0	9.4
21	120	6.3	13	10	5.0	7.5	91	14	30	19	3.0	5.8
22	51	6.7	12	15	4.0	9.0	---	---	e15	21	3.0	5.3
23	100	7.1	15	20	4.0	11	---	---	e20	16	2.0	4.1
24	67	7.7	12	12	3.0	8.1	---	---	e10	8.0	1.0	3.5
25	29	8.1	11	11	3.0	6.3	---	---	e10	27	2.0	3.9
26	160	7.0	34	9.0	3.0	4.7	---	---	e10	14	0.0	4.0
27	200	12	54	12	4.0	6.0	---	---	e10	19	1.0	4.4
28	29	4.0	11	170	4.0	18	---	---	e10	36	2.0	5.7
29	27	3.0	5.9	---	---	e22	---	---	e10	13	1.0	3.5
30	16	5.0	7.2	---	---	e5.7	---	---	e10	22	2.0	4.3
31	---	---	---	---	---	e2.7	---	---	e10	---	---	---
MONTH	---	---	13	---	---	9.6	---	---	25	---	---	8.5

e Estimated

06893590 BLUE RIVER AT 12TH STREET IN KANSAS CITY, MO

LOCATION.--Lat 39°05'48", long 94°29'26" in NW ¼ NE ¼ SW ¼ sec. 6, T.49 N., R.32 W., Jackson County, Hydrologic Unit 10300101, on left downstream end of Twelfth Street Bridge, 5.0 mi above Missouri River, and at river mile 4.3.

DRAINAGE AREA.--258 mi<sup>2</sup>.

PERIOD OF RECORD.--Sept. 3, 1980 to current year. Stage only from Sept. 3, 1980 to Sept. 30, 1999.

GAGE.--Water-stage recorder. Datum of gage 714.41 ft above National Geodetic Vertical Datum of 1929. Prior to May 20, 1997, datum of gage 10 ft higher.

REMARKS.--Records fair except estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum discharge of 34,900 ft<sup>3</sup>/s during flood of Sept. 13, 1977.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	46	e35	e37	e42	370	66	e45	221	167	36	37	33
2	e39	e34	e37	e42	250	83	e36	198	148	35	31	32
3	e38	e32	e37	e43	216	85	e38	172	136	34	31	30
4	e42	e37	e37	e47	190	73	e39	155	129	53	34	29
5	978	e40	e33	e48	137	75	e40	149	245	75	33	32
6	178	e38	e35	e48	109	80	43	1070	141	42	32	33
7	77	e43	e35	e45	95	76	45	816	121	38	31	33
8	60	e41	e34	42	89	73	107	1250	111	72	31	34
9	52	e35	e34	45	85	319	322	2250	180	43	29	36
10	102	e37	e35	45	81	130	91	736	289	46	26	36
11	85	e42	e39	43	75	95	69	1120	156	53	26	38
12	53	e41	e90	44	69	88	65	6370	1390	101	40	35
13	49	42	270	42	64	77	61	2470	291	47	945	35
14	47	42	89	44	61	72	56	689	118	44	169	72
15	551	42	67	42	59	68	52	441	88	33	66	106
16	602	e38	62	42	57	65	50	513	73	30	53	59
17	123	e36	58	43	56	62	49	577	63	27	57	43
18	89	e40	55	46	54	60	49	463	60	26	83	42
19	79	60	e52	50	370	60	241	262	53	28	162	300
20	59	45	e52	58	908	60	405	218	47	502	130	129
21	53	e37	e52	57	241	e59	3900	186	47	62	57	59
22	53	e38	e52	53	134	e56	903	174	42	41	49	45
23	55	e37	e50	50	106	e56	365	189	40	36	66	39
24	60	233	e49	49	93	e55	249	272	37	34	48	38
25	58	89	e48	44	84	e57	198	4950	39	33	39	35
26	46	53	e46	42	77	60	172	1040	103	26	39	35
27	48	51	e46	42	70	e56	1390	628	339	26	38	34
28	e38	46	e48	43	66	e82	1420	429	61	50	35	34
29	e35	44	e50	44	---	89	417	273	44	315	35	30
30	e32	e39	e50	120	---	e55	272	218	39	79	32	29
31	e30	---	e48	1070	---	e50	---	189	---	46	32	---
MEAN	124	48.9	55.7	81.1	152	78.8	373	925	160	68.2	81.2	52.2
MAX	978	233	270	1070	908	319	3900	6370	1390	502	945	300
MIN	30	32	33	42	54	50	36	149	37	26	26	29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	MEAN	130	79.0	53.9	87.7	256	186	296	468	685	151	106	116
MAX	210	132	55.7	149	478	325	463	925	1542	209	167	180	
(WY)	2001	2001	2002	2001	2001	2001	2001	2002	2001	2000	2001	2001	
MIN	54.4	48.9	52.1	32.5	141	78.8	50.8	139	160	68.2	68.7	52.2	
(WY)	2000	2002	2001	2000	2000	2002	2000	2000	2002	2002	2000	2002	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL MEAN	334		184		266	
HIGHEST ANNUAL MEAN					348	
LOWEST ANNUAL MEAN					184	
HIGHEST DAILY MEAN	9480	Jun 6	6370	May 12	9480	Jun 6 2001
LOWEST DAILY MEAN	30	Oct 31	26	Jul 18,26,27, Aug 10,11	22	Nov 10 1999
ANNUAL SEVEN-DAY MINIMUM	34	Oct 29	30	Aug 5	24	Nov 10 1999
MAXIMUM PEAK FLOW	---		8680	May 12	13300	Jun 6 2001
MAXIMUM PEAK STAGE	---		18.30	May 12	21.80	Jun 6 2001
INSTANTANEOUS LOW FLOW	---		23	Jul 18,26, Aug 10	20	Jun 9 2000
10 PERCENT EXCEEDS	586		320		453	
50 PERCENT EXCEEDS	105		53		72	
90 PERCENT EXCEEDS	41		34		37	

e Estimated

## LITTLE BLUE RIVER BASIN

06893791 LONGVIEW RESERVOIR AT KANSAS CITY, MO

LOCATION.--Lat 38°55'29", long 94°27'35", in SE ¼ NE ¼ NW ¼ sec.4, T.48 N., R.32 W., Jackson County, Hydrologic Unit 10300101, in the U.S. Army Corps of Engineers Administration Building at the right end of dam on Little Blue River at Kansas City and 3.1 mi upstream from Cedar Creek.

DRAINAGE AREA.--50.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1985 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by a rolled earthfill type dam. Closure began June 16, 1983. Storage began on Sept. 16, 1985. An uncontrolled limited service type spillway 200 ft wide is located at the left abutment. Capacity of surcharge pool 35,370 ac-ft (909.0 ft to 922.9 ft); of flood control pool 24,800 ac-ft (elevation 891.0 ft to 909.0 ft); and of multipurpose pool 22,100 ac-ft (elevation 816.0 ft to 891.0 ft). Lake is used for flood control, water-quality control, recreation, and fish and wildlife enhancement. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 37,100 ac-ft, May 16, 1990, elevation, 903.36 ft; minimum, 2,680 ac-ft, Oct. 1, 1985, elevation, 849.40 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 28,100 ac-ft, May 12, elevation, 896.67 ft; minimum, 21,500 ac-ft, Sept. 14, elevation, 890.33 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	891.17	891.10	890.94	890.79	891.48	891.23	891.10	891.76	891.62	890.98	890.81	890.68
2	891.15	891.09	890.94	890.78	891.50	891.25	891.08	891.64	891.54	890.96	890.78	890.68
3	891.12	891.09	890.94	890.78	891.53	891.24	891.06	891.54	891.45	890.95	890.76	890.65
4	891.10	891.08	890.94	890.77	891.49	891.22	891.06	891.46	891.32	890.94	890.75	890.64
5	891.25	891.08	890.95	890.76	891.45	891.20	891.07	891.41	891.32	890.93	890.74	890.61
6	891.32	891.08	890.95	890.76	891.41	891.21	891.05	891.37	891.30	890.92	890.73	890.58
7	891.29	891.08	890.95	890.76	891.37	891.21	891.05	891.76	891.24	890.90	890.71	890.52
8	891.26	891.07	890.94	890.76	891.34	891.21	891.06	892.44	891.18	890.88	890.68	890.52
9	891.22	891.06	890.94	890.76	891.32	891.29	891.18	893.82	891.16	890.86	890.66	890.50
10	891.22	891.05	890.93	890.76	891.28	891.30	891.18	893.08	891.20	890.84	890.66	890.49
11	891.22	891.05	890.93	890.77	891.26	891.29	891.19	892.99	891.20	890.84	890.64	890.44
12	891.20	891.04	890.93	890.77	891.23	891.27	891.18	896.67	893.52	890.95	890.64	890.37
13	891.19	891.04	891.02	890.78	891.21	891.24	891.17	895.86	892.92	890.96	890.77	890.35
14	891.17	891.03	891.01	890.77	891.20	891.23	891.17	894.32	892.43	890.95	890.85	890.33
15	891.15	891.03	890.99	890.76	891.18	891.21	891.15	893.26	892.10	890.94	890.85	890.35
16	891.46	891.02	890.98	890.76	891.16	891.20	891.15	892.65	891.85	890.93	890.84	890.35
17	891.43	891.01	890.96	890.76	891.15	891.19	891.14	892.52	891.63	890.89	890.83	890.35
18	891.38	891.01	890.95	890.75	891.14	891.18	891.14	892.50	891.52	890.88	890.83	890.34
19	891.34	891.01	890.93	890.78	891.19	891.17	891.17	892.20	891.42	890.88	890.90	890.47
20	891.31	891.01	890.92	890.79	891.57	891.17	891.21	891.97	891.34	890.93	890.91	890.53
21	891.29	891.00	890.90	890.78	891.55	891.15	891.98	891.81	891.28	890.92	890.82	890.52
22	891.27	890.99	890.89	890.78	891.50	891.14	892.04	891.70	891.24	890.89	890.81	890.50
23	891.27	890.98	890.88	890.78	891.46	891.12	891.88	891.59	891.19	890.80	890.85	890.47
24	891.27	891.00	890.87	890.78	891.41	891.10	891.73	891.56	891.15	890.79	890.83	890.45
25	891.24	891.00	890.86	890.78	891.34	891.10	891.59	893.68	891.12	890.77	890.82	890.44
26	891.21	890.99	890.85	890.78	891.32	891.10	891.51	893.09	891.09	890.73	890.80	890.43
27	891.19	890.98	890.84	890.77	891.28	891.10	891.52	892.63	891.10	890.73	890.78	890.41
28	891.16	890.97	890.81	890.76	891.26	891.10	892.40	892.33	891.07	890.71	890.76	890.40
29	891.12	890.95	890.80	890.76	---	891.11	892.13	892.07	891.04	890.82	890.75	890.38
30	891.12	890.95	890.80	890.85	---	891.10	891.91	891.90	891.01	890.85	890.73	890.38
31	891.12	---	890.79	891.34	---	891.10	---	891.76	---	890.83	890.70	---
MAX	891.46	891.10	891.02	891.34	891.57	891.30	892.40	896.67	893.52	890.98	890.91	890.68
MIN	891.10	890.95	890.79	890.75	891.14	891.10	891.05	891.37	891.01	890.71	890.64	890.33
(-)	22200	22100	22000	22500	22400	22200	23000	22900	22100	22000	21900	21600
(=)	-100	-100	-100	+500	-100	-200	+800	-100	-800	-100	-100	-300

CAL YR 2001....-200

WTR YR 2002....-700

(-) Contents, in acre-feet, at the end of the month.

(=) Change in contents, in acre-feet.



## 06893885 BLUE SPRINGS RESERVOIR NEAR BLUE SPRINGS, MO

LOCATION.--Lat 39°01'03", long 94°20'06", sec.33, T.49 N., R.31 W., Jackson County, Hydrologic Unit 10300101, in maintenance building at right end of dam on East Fork Little Blue River, 2.2 mi west of Blue Springs, and 2.5 mi upstream from mouth.

DRAINAGE AREA.--32.8 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1988 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by a rolled earthfill type dam. An uncontrolled limited service type spillway 300 ft wide is located on left abutment. Capacity of surcharge pool, 3,310 ac-ft (elevation 820.3 to 823.6 ft); of flood control pool, 1,590 ac-ft (elevation 802.0 to 820.3 ft); and of multipurpose pool, 10,640 ac-ft (elevation 760.0 to 802.0 ft). U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records provided by the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 22,800 ac-ft, May 17, 1990, elevation, 816.37 ft; minimum contents, 142 ac-ft, Oct. 22, 29, 30, and Nov. 1-11, 1988, elevation, 773.10 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 15,700 ac-ft, May 13, elevation, 808.28 ft; minimum, 9,430 ac-ft, Jan. 18 elevation, 800.00 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	802.55	802.34	802.10	800.31	800.50	802.43	802.21	803.08	802.99	802.11	801.79	801.49
2	802.51	802.31	802.10	800.23	800.61	802.44	802.20	803.00	802.88	802.09	801.76	801.48
3	802.49	802.30	802.09	800.14	800.72	802.45	802.18	802.90	802.79	802.07	801.74	801.45
4	802.45	802.30	802.10	800.12	800.83	802.44	802.17	802.84	802.70	802.04	801.73	801.43
5	802.53	802.28	802.11	800.11	800.92	802.43	802.16	802.77	802.68	802.08	801.71	801.42
6	802.54	802.28	802.12	800.10	801.02	802.43	802.16	802.82	802.60	802.05	801.70	801.41
7	802.52	802.27	802.11	800.10	801.08	802.42	802.17	803.10	802.56	802.05	801.68	801.40
8	802.51	802.25	802.05	800.10	801.16	802.42	802.16	803.33	802.51	802.03	801.64	801.38
9	802.48	802.25	801.98	800.10	801.25	802.44	802.23	804.85	802.46	802.01	801.62	801.36
10	802.47	802.23	801.90	800.10	801.30	802.44	802.23	805.01	802.46	801.99	801.60	801.34
11	802.47	802.22	801.82	800.10	801.37	802.43	802.23	804.70	802.43	801.98	801.59	801.32
12	802.44	802.21	801.76	800.08	801.42	802.42	802.23	806.60	802.54	802.05	801.57	801.29
13	802.44	802.20	801.76	800.07	801.47	802.41	802.23	808.28	802.54	802.05	801.58	801.28
14	802.42	802.21	801.70	800.05	801.52	802.41	802.22	807.63	802.54	802.03	801.57	801.27
15	802.39	802.19	801.63	800.04	801.53	802.38	802.22	806.68	802.52	802.02	801.56	801.30
16	802.55	802.19	801.54	800.02	801.59	802.37	802.22	805.70	802.50	802.01	801.55	801.29
17	802.54	802.18	801.48	800.01	801.63	802.36	802.22	804.72	802.47	802.01	801.55	801.27
18	802.54	802.18	801.40	800.00	801.66	802.35	802.25	804.10	802.44	802.00	801.55	801.30
19	802.53	802.19	801.32	800.01	801.74	802.34	802.26	803.69	802.42	801.98	801.61	801.33
20	802.52	802.18	801.26	800.02	802.04	802.33	802.28	803.41	802.39	801.96	801.60	801.35
21	802.50	802.17	801.18	800.03	802.17	802.31	802.74	803.19	802.37	801.95	801.59	801.32
22	802.50	802.16	801.12	800.04	802.27	802.29	802.92	803.04	802.34	801.94	801.57	801.30
23	802.48	802.14	801.04	800.05	802.35	802.27	802.98	802.94	802.30	801.91	801.57	801.28
24	802.48	802.15	800.95	800.05	802.40	802.26	802.97	802.86	802.27	801.88	801.60	801.27
25	802.46	802.15	800.87	800.05	802.41	802.27	802.92	803.80	802.25	801.87	801.59	801.25
26	802.42	802.13	800.80	800.05	802.44	802.25	802.85	804.23	802.22	801.85	801.58	801.24
27	802.40	802.13	800.70	800.06	802.43	802.25	802.87	803.99	802.21	801.83	801.57	801.21
28	802.38	802.12	800.63	800.04	802.44	802.24	803.21	803.69	802.19	801.80	801.55	801.21
29	802.36	802.11	800.55	800.03	---	802.24	803.24	803.47	802.16	801.83	801.54	801.19
30	802.35	802.10	800.47	800.05	---	802.23	803.17	803.26	802.14	801.82	801.51	801.19
31	802.34	---	800.40	800.31	---	802.22	---	803.11	---	801.80	801.51	---
MEAN	802.47	802.20	801.45	800.08	801.58	802.35	802.47	804.09	802.46	801.97	801.61	801.32
MAX	802.55	802.34	802.12	800.31	802.44	802.45	803.24	808.28	802.99	802.11	801.79	801.49
MIN	802.34	802.10	800.40	800.00	800.50	802.22	802.16	802.77	802.14	801.80	801.51	801.19
(-)	11100	11000	9720	9660	11900	11000	11700	11700	11000	10700	10500	10300
(=)	-200	-100	-1280	-60	+2240	-900	+700	0	-700	-300	-200	-200

CAL YR 2001....-1280

WTR YR 2002....-1000

(-) Contents, in acre-feet, at the end of the month.

(=) Change in contents, in acre-feet.

## LITTLE BLUE RIVER BASIN

06894000 LITTLE BLUE RIVER NEAR LAKE CITY, MO

LOCATION.--Lat 39°06'02", long 94°18'01", in SW ¼ SE ¼ sec.35, T.50 N., R.31 W., Jackson County, Hydrologic Unit 10300101, on right bank 50 ft downstream from bridge on west bound lane of State Highway 78, 3.0 mi southwest of Lake City, and 10.5 mi upstream from mouth.

DRAINAGE AREA.--184 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is 719.15 ft above National Geodetic Vertical Datum of 1929. Prior to July 24, 1957, nonrecording gage at site 50 ft downstream at same datum; July 24, 1957, to Apr. 28, 1977, water-stage recorder; Apr. 29, 1977, to May 10, 1979, nonrecording gage; May 11, 1979, to Sept. 12, 1983, water-stage recorder at site 50 ft upstream at present datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	44	30	16	31	180	51	26	292	225	20	6.3	3.7
2	40	29	16	31	153	e55	24	254	192	18	5.2	3.4
3	40	28	16	30	147	e52	24	225	166	17	5.3	3.6
4	37	26	17	16	128	e45	21	202	148	21	5.9	3.8
5	325	27	20	11	101	e52	21	184	142	22	5.8	3.8
6	120	24	24	13	82	57	21	1830	125	20	6.7	3.8
7	72	23	22	12	73	53	25	893	109	17	5.7	3.9
8	60	22	46	12	66	57	61	1200	97	30	5.5	4.1
9	51	22	46	13	62	136	107	2310	90	14	5.2	4.5
10	54	21	45	14	58	85	58	1220	101	10	5.3	4.7
11	54	21	45	13	51	68	44	2230	96	33	5.1	4.8
12	44	20	68	12	46	62	46	4320	516	98	5.5	4.9
13	39	19	101	12	42	63	41	2040	481	38	9.3	4.8
14	35	21	55	11	39	52	40	1590	324	19	27	5.0
15	185	29	44	10	38	46	40	1170	237	14	10	5.3
16	232	23	41	10	35	45	41	985	186	11	6.7	4.3
17	102	21	39	10	33	46	41	838	151	9.4	5.7	4.0
18	79	21	40	9.8	31	49	40	661	127	8.5	8.2	4.0
19	66	33	39	11	205	48	145	477	108	7.7	22	37
20	58	22	37	14	481	44	312	371	88	7.0	59	25
21	53	20	33	12	166	41	2170	305	76	6.7	11	6.7
22	49	19	35	12	117	37	502	261	63	6.2	6.7	4.3
23	59	18	34	17	91	35	330	223	54	6.8	32	3.5
24	47	28	34	27	79	35	265	221	44	6.2	28	3.1
25	43	26	34	26	72	44	220	3160	38	5.7	8.0	3.0
26	38	22	34	25	69	44	197	1010	36	5.3	5.3	2.8
27	35	21	34	24	56	32	1020	752	62	5.0	4.4	2.8
28	32	18	33	23	53	40	686	533	36	5.0	4.1	2.8
29	33	17	31	24	---	35	438	400	27	21	3.8	3.2
30	31	17	31	74	---	29	349	319	23	21	3.8	3.7
31	30	---	31	389	---	27	---	263	---	9.1	3.9	---
MEAN	70.6	22.9	36.8	30.6	98.4	50.5	245	992	139	17.2	10.5	5.81
MAX	325	33	101	389	481	136	2170	4320	516	98	59	37
MIN	30	17	16	9.8	31	27	21	184	23	5.0	3.8	2.8
IN.	0.44	0.14	0.23	0.19	0.56	0.32	1.49	6.21	0.84	0.11	0.07	0.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1948 - 2002, BY WATER YEAR (WY)

	134	109	89.0	87.2	132	192	249	281	272	144	92.0	154
MEAN	134	109	89.0	87.2	132	192	249	281	272	144	92.0	154
MAX	983	854	495	357	576	1153	1069	1534	1216	1103	1455	1018
(WY)	1987	1962	1993	1993	1985	1973	1983	1995	1967	1993	1982	1961
MIN	0.13	0.49	1.36	1.36	3.09	4.15	11.3	27.9	10.3	0.26	0.02	0.20
(WY)	1954	1957	1956	1957	1957	1956	1954	1988	1953	1954	1953	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1948 - 2002
ANNUAL MEAN	214	144	162
HIGHEST ANNUAL MEAN			440
LOWEST ANNUAL MEAN			11.5
HIGHEST DAILY MEAN	4960	Jun 6	27700
LOWEST DAILY MEAN	11	Jan 2	0.00
ANNUAL SEVEN-DAY MINIMUM	16	Jan 1	0.00
MAXIMUM PEAK FLOW	---	5130	42300
MAXIMUM PEAK STAGE	---	16.76	27.94
INSTANTANEOUS LOW FLOW	---	2.7	0.00
ANNUAL RUNOFF (INCHES)	15.83	10.63	11.94
10 PERCENT EXCEEDS	430	297	317
50 PERCENT EXCEEDS	90	35	48
90 PERCENT EXCEEDS	22	5.3	8.1

e Estimated

06895500 MISSOURI RIVER AT WAVERLY, MO

LOCATION.--Lat 39°12'54", long 93°30'54", sec.14, T.51 N., R.23 W., Lafayette County, Hydrologic Unit 10300101, on downstream side of pier of bridge on State Highway 24 and U.S. Highway 65 at Waverly and at mile 293.5.

DRAINAGE AREA.--485,900 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

PERIOD OF RECORD.--October 1928 to current year. Gage-height records collected at same site 1878-79, 1883-99 are contained in reports of the Missouri River Commission; since 1915 in reports of the National Weather Service. Daily discharge not computed Apr. 1, 1977, to Mar. 31, 1978.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 646.00 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 1, 1934, at datum 5.00 ft lower; Mar. 30, 1929, to Apr. 4, 1934, nonrecording gage; Apr. 5, 1934, to June 13, 1943, water-stage recorder; June 14, 1943, to Sept. 15, 1944, nonrecording gage; Sept. 16, 1944, to May 28, 1969, water-stage recorder all at present site and datum; May 29, 1969, to Jan. 8, 1984, water-stage recorder at site 450 ft downstream, present datum; Jan. 9, 1984, to May 24, 1984, nonrecording gage at present site and datum.

REMARKS.--Records good. Some regulation from many upstream reservoirs. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52100	40200	41700	26100	34300	28800	37300	44800	52900	37800	32800	37400
2	53700	39600	40700	24700	31500	29000	37400	44000	51400	37300	31900	37600
3	54600	39700	39100	24400	29200	28900	37300	43800	50800	36800	31400	37400
4	50900	40400	36800	23600	28100	27100	37700	42100	49100	36600	30900	36400
5	50300	40700	34800	22900	26800	25900	39000	40700	47800	37100	30600	35900
6	52200	41100	33100	22900	25300	25800	39900	51500	48400	36200	30400	36000
7	47300	41300	31500	22900	25100	25200	40000	77300	46800	35900	30400	36000
8	45100	41300	31200	23300	25200	24800	39600	82100	45400	35500	30600	35600
9	43500	41200	31200	24200	25400	25600	39800	93200	44700	35300	31300	35400
10	42700	40700	30800	24900	25900	27700	39900	75100	44400	34800	33400	35400
11	42600	40500	31000	26200	27300	28400	39400	63400	43900	34900	34100	35400
12	42900	40600	31100	27200	28300	28500	39500	81600	48000	35500	32600	35300
13	44000	40600	31100	26500	29600	27900	39400	100000	54600	35000	32000	35100
14	44000	40400	31300	26600	30300	27500	40300	92500	52400	35100	33600	35400
15	44600	40500	30400	27800	30200	27600	41300	79300	59100	36000	32600	35900
16	51800	40200	29800	28900	30300	27800	40000	66100	61800	37600	33000	36600
17	52700	40000	29200	29800	30600	29700	39000	58500	54800	36400	33100	36900
18	48200	40000	29100	30400	30500	35800	38500	55500	49700	35200	31800	37100
19	45300	39900	29000	30300	30300	37800	38900	56400	48400	34800	32300	37600
20	44300	40500	28500	29100	34200	33900	40800	54400	47300	34400	35100	37600
21	43300	41100	28200	28300	38300	30700	52300	51200	45600	34300	35800	36400
22	42700	41200	28700	29000	34800	29500	70600	47700	44700	33500	38800	35800
23	42700	41000	30200	29900	33300	29300	55100	45300	43500	32900	42300	36300
24	42200	41000	30800	29500	32300	29800	47300	45900	42800	32200	40700	36000
25	42000	41700	30500	28700	31200	32200	43700	59500	42800	31700	45500	34800
26	42400	42400	30000	28200	30200	35700	41300	67900	42800	31400	57100	34000
27	41500	44000	29800	27900	29400	38200	41500	57300	41900	31500	48800	33400
28	41200	45200	29600	27600	29100	39900	54000	57400	41600	31600	45000	33100
29	40700	45900	28800	27400	---	39000	51700	53900	41600	32600	42300	33000
30	40300	43700	27500	28600	---	37100	46600	51800	38600	34600	39800	33900
31	40600	---	26800	31000	---	37100	---	52300	---	34300	38300	---
MEAN	45560	41220	31360	27060	29890	30720	42970	61050	47590	34800	36070	35760
MAX	54600	45900	41700	31000	38300	39900	70600	100000	61800	37800	57100	37600
MIN	40300	39600	26800	22900	25100	24800	37300	40700	38600	31400	30400	33000
IN.	0.11	0.09	0.07	0.06	0.06	0.07	0.10	0.14	0.11	0.08	0.09	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	57700	53570	38360	30660	40140	56350	73910	76350	81750	73380	57540	57720
MAX	141900	116200	74470	65720	79780	133500	145500	168400	176600	306500	155700	121700
(WY)	1974	1999	1987	1973	1973	1979	1984	1995	1984	1993	1993	1993
MIN	35340	21620	13010	14770	16830	19250	37920	39350	41340	34800	34420	35380
(WY)	1992	1992	1964	1963	1964	1964	1989	1989	1988	2002	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002 <sup>a</sup>
ANNUAL MEAN	57270	38710	58250
HIGHEST ANNUAL MEAN			109900
LOWEST ANNUAL MEAN			35950
HIGHEST DAILY MEAN	168000	Jun 22	611000
LOWEST DAILY MEAN	22900	Jan 27	5000
ANNUAL SEVEN-DAY MINIMUM	23800	Jan 1	5540
MAXIMUM PEAK FLOW	---		103000
MAXIMUM PEAK STAGE	---		18.96
INSTANTANEOUS LOW FLOW	---		22700
ANNUAL RUNOFF (INCHES)	1.60		1.08
10 PERCENT EXCEEDS	93900		51900
50 PERCENT EXCEEDS	47300		36900
90 PERCENT EXCEEDS	27900		27900

<sup>a</sup> Post-regulation period.

## GRAND RIVER BASIN

06896187 MIDDLE FORK GRAND RIVER NEAR GRANT CITY, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°27'17", long 94°24'12", in NW ¼ SW ¼ NW ¼ sec.9, T.65 N., R.31 W., Worth County, Hydrologic Unit 10280101, on Highway 169 approximately 2.0 mi south of the junction of Highway 169 and State Highway 46 in Grant City.

DRAINAGE AREA.--82.4 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)	
DATE	TIME	SAMPLE TYPE											
NOV 07...	1425	ENVIRONMENTAL	3.2	10.6	117	8.3	519	18.5	220	63.9	13.8	5.37	
JAN 16...	0950	ENVIRONMENTAL	2.3	13.2	95	8.3	688	.5	--	--	--	--	
MAR 13...	0925	ENVIRONMENTAL	4.4	11.4	95	8.2	519	6.0	--	--	--	--	
MAR 13...	0926	REPLICATE	--	--	--	--	--	--	--	--	--	--	
MAY 08...	1015	ENVIRONMENTAL	28	7.9	88	8.1	387	18.5	160	47.1	10.0	5.70	
JUL 31...	0927	ENVIRONMENTAL	.40	7.0	86	8.1	533	24.0	--	--	--	--	
SEP 04...	1020	ENVIRONMENTAL	.15	7.3	83	8.0	506	20.5	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 07...	17.0	193	196	238	0	24.2	.2	49.1	<10	320	<.04	.34	<.05
JAN 16...	--	240	240	287	3	--	--	--	<10	--	.26	.82	1.79
MAR 13...	--	188	191	233	0	--	--	--	<10	--	.05	.47	.59
MAR 13...	--	--	--	--	--	--	--	--	10	--	.05	.45	.59
MAY 08...	9.24	143	146	178	0	12.2	.3	35.4	250	235	.07	1.3	1.23
JUL 31...	--	210	210	257	0	--	--	--	<10	--	<.04	.37	<.05
SEP 04...	--	199	198	242	0	--	--	--	<10	--	<.04	.37	<.05
DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 07...	<.008	.06	.05	.09	250	K240	140	4	38	1.2	.04	<.1	<6
JAN 16...	.043	<.06	<.02	E.04	33	K4	110	--	--	--	--	--	--
MAR 13...	.015	E.04	E.01	E.05	K17	K25	K33	--	--	--	--	--	--
MAR 13...	.015	E.04	E.01	.06	--	--	--	--	--	--	--	--	--
MAY 08...	.037	.09	.07	.38	6100	7300	3200	6	3040	1.6	E.02	E.1	<6
JUL 31...	<.008	E.05	.05	.09	300	280	640	--	--	--	--	--	--
SEP 04...	<.008	E.06	.05	.09	480	K740	K2100	--	--	--	--	--	--

06896187 MIDDLE FORK GRAND RIVER NEAR GRANT CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 07...	E7	<.08	<1	579	<.01	E.2	3	3
JAN 16...	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--
MAY 08...	<10	E.05	6	26.6	.02	1.1	2	18
JUL 31...	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## GRAND RIVER BASIN

06896320 EAST FORK GRAND RIVER AT ALLENDALE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°28'53", long 94°19'06", in SE ¼ NE ¼ NW ¼ sec.32, T.66 N., R.30 W., Worth County, Hydrologic Unit 10280101, located in Allendale on Highway 46, approximately 1.6 mi west of the junction of Highway NN and State Highway 46.

DRAINAGE AREA.--211 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 07...	1025	ENVIRONMENTAL		5.3	11.0	105	8.2	454	12.0	220	64.3	13.5	5.71	
JAN 16...	1425	ENVIRONMENTAL		3.2	16.0	115	8.4	529	.5	--	--	--	--	
MAR 13...	1300	ENVIRONMENTAL		14	12.1	107	8.5	417	8.5	--	--	--	--	
MAY 08...	1420	ENVIRONMENTAL		75	8.3	99	8.1	349	22.0	160	47.3	8.97	4.64	
JUL 31...	1410	ENVIRONMENTAL		.32	8.4	125	8.2	462	34.5	--	--	--	--	
SEP 04...	1415	ENVIRONMENTAL		<.01	11.6	141	8.1	587	23.5	--	--	--	--	
DATE		ANC WATER UNFLTRD FET FIELD (mg/L as Na) (00930)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	
NOV 07...	8.53	209	210	256	0	8.47	.2	30.6	12	278	<.04	.41	<.05	
JAN 16...	--	257	258	305	5	--	--	--	<10	--	<.04	.30	.10	
MAR 13...	--	173	171	198	5	--	--	--	<10	--	<.04	.38	<.05	
MAY 08...	6.41	144	142	174	0	6.47	.2	29.5	190	215	.07	1.2	.64	
JUL 31...	--	212	212	250	4	--	--	--	<10	--	<.04	.54	.10	
SEP 04...	--	263	265	323	0	--	--	--	19	--	<.04	.61	1.99	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 07...	<.008	E.04	.02	.08	70	60	340	4	118	1.2	E.02	<.1	<6	
JAN 16...	<.008	<.06	<.02	<.06	K4	K2	66	--	--	--	--	--	--	
MAR 13...	<.008	<.06	<.02	E.04	K14	K6	K48	--	--	--	--	--	--	
MAY 08...	.029	.07	.05	.29	K800	1300	1300	6	2400	1.6	E.03	<.1	E3	
JUL 31...	.012	E.03	<.02	E.05	40	70	99	--	--	--	--	--	--	
SEP 04...	.023	E.05	.04	.11	98	160	K230	--	--	--	--	--	--	

06896320 EAST FORK GRAND RIVER AT ALLENDALE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 07...	13	<.08	<1	346	<.01	<.3	4	3
JAN 16...	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--
MAY 08...	E6	E.07	4	15.5	.01	1.1	5	12
JUL 31...	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## GRAND RIVER BASIN

06897000 EAST FORK BIG CREEK NEAR BETHANY, MO

LOCATION.--Lat 40°17'50", long 94°01'36", in SE ¼ sec.34, T.64 N., R.28 W., Harrison County, on right bank 50 ft downstream from bridge on old U.S. Highway 69, 2 mi north of Bethany, and 4 mi upstream from confluence with West Fork.

DRAINAGE AREA.--95 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1934 to September 1972, October 1996 to September 1999, October 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is 854.74 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	7.6	4.2	e0.30	e1.5	e3.5	9.4	53	11	1.3	2.6	0.44
2	1.8	7.2	3.9	e0.28	e1.4	e2.5	7.6	40	9.5	0.79	2.6	0.20
3	1.8	7.9	3.6	e0.28	e1.5	e1.5	5.9	29	8.4	0.71	2.4	0.07
4	1.9	7.8	3.4	e0.28	e1.0	e2.0	4.5	22	7.6	1.0	2.2	0.00
5	4.2	7.1	3.0	e0.30	e1.6	e3.0	3.7	18	7.5	1.7	2.0	0.00
6	11	6.6	2.7	e0.35	e1.9	e3.5	2.8	681	7.4	0.75	2.5	0.00
7	11	7.3	2.6	e0.48	e2.5	3.9	2.7	552	7.0	0.68	3.7	0.00
8	7.3	7.2	2.0	e0.65	e3.5	4.0	5.4	154	6.5	0.89	3.7	0.00
9	3.4	6.4	2.5	e0.90	e4.8	6.3	41	82	5.7	1.2	2.9	0.00
10	5.2	6.1	1.7	1.3	8.6	14	36	63	5.3	11	2.5	0.00
11	4.9	5.7	2.0	1.7	9.2	9.7	23	950	5.7	72	2.3	0.00
12	3.3	5.4	2.3	2.5	11	7.8	485	1310	294	82	2.1	0.00
13	4.1	5.3	3.0	3.1	10	7.0	124	377	177	34	3.8	0.00
14	6.0	5.2	3.2	3.3	8.7	6.4	59	230	e34	11	3.6	0.00
15	6.4	5.2	3.3	3.5	7.4	5.9	36	108	e22	7.6	3.0	0.00
16	7.5	5.1	3.5	3.3	5.8	5.3	24	57	e12	6.5	3.0	0.00
17	7.1	4.8	3.1	3.2	6.0	4.9	18	43	e8.3	6.0	3.2	0.00
18	5.1	4.5	2.9	3.1	5.3	4.6	21	31	e6.1	5.3	3.5	0.00
19	3.6	4.8	3.1	3.1	6.4	4.2	347	22	4.7	4.5	3.3	0.00
20	2.9	5.2	3.2	2.9	8.8	4.0	92	16	4.6	4.1	14	0.00
21	3.3	5.0	3.5	3.0	7.2	3.8	150	13	4.0	3.8	11	0.00
22	6.7	4.9	3.1	3.0	6.4	3.5	103	15	2.8	4.0	4.9	0.00
23	38	4.5	e2.8	3.1	5.3	2.9	61	17	2.1	4.1	e7.5	0.00
24	55	5.1	e2.0	2.9	4.7	3.5	64	14	2.0	3.5	6.1	0.00
25	21	6.0	e1.0	3.0	4.4	4.4	127	45	1.8	3.6	4.3	0.00
26	13	5.8	e0.50	3.1	e4.0	4.5	63	43	2.1	3.5	3.2	0.00
27	10	5.2	e0.45	3.1	e3.0	4.7	291	25	3.1	3.4	2.3	0.00
28	8.6	4.9	e0.40	3.3	e3.5	2.6	651	19	2.1	3.4	1.7	0.00
29	7.9	5.0	e0.34	3.2	---	24	167	14	1.7	3.1	1.2	0.00
30	8.2	4.5	e0.35	e1.8	---	43	81	12	1.7	2.7	0.88	0.00
31	8.4	---	e0.30	e1.2	---	18	---	9.9	---	2.5	0.70	---
MEAN	9.06	5.78	2.38	2.11	5.19	7.06	104	163	22.3	9.38	3.64	0.02
MAX	55	7.9	4.2	3.5	11	43	651	1310	294	82	14	0.44
MIN	1.8	4.5	0.30	0.28	1.0	1.5	2.7	9.9	1.7	0.68	0.70	0.00
IN.	0.11	0.07	0.03	0.03	0.06	0.09	1.22	1.98	0.26	0.11	0.04	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	26.9	27.8	15.6	24.6	66.3	86.8	82.3	78.7	111	32.6	15.6	32.8
MAX	140	313	78.1	240	349	341	305	332	932	284	94.1	425
(WY)	1960	1962	1945	1946	1937	1960	1944	1945	1947	1969	1959	1961
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
(WY)	1938	1938	1938	1939	1938	1956	1956	1956	1956	1936	1936	1937

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	87.2	27.9	50.4
HIGHEST ANNUAL MEAN			111
LOWEST ANNUAL MEAN			2.27
HIGHEST DAILY MEAN	1390	Feb 24	6200
LOWEST DAILY MEAN	0.30	Dec 31	0.00
ANNUAL SEVEN-DAY MINIMUM	0.48	Dec 25	0.00
MAXIMUM PEAK FLOW	---	1780	8120
MAXIMUM PEAK STAGE	---	9.91	17.65
INSTANTANEOUS LOW FLOW	---	0.00	0.00
ANNUAL RUNOFF (INCHES)	12.46	3.99	7.21
10 PERCENT EXCEEDS	256	42	90
50 PERCENT EXCEEDS	12	4.1	4.2
90 PERCENT EXCEEDS	2.5	0.35	0.00

e Estimated



06897500 GRAND RIVER NEAR GALLATIN, MO

LOCATION.--Lat 39°55'37", long 93°56'33", in SW ¼ NW ¼ sec.16, T.59 N., R.27 W., Daviess County, Hydrologic Unit 10280101, on left bank 100 ft upstream from bridge on State Highway 6, 50 ft downstream from Chicago, Rock Island and Pacific Railroad Company Bridge, 1.0 mi northeast of Gallatin, 6.0 mi upstream from Honey Creek, and at mile 90.0.

DRAINAGE AREA.--2,250 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1921 to current year.

REVISED RECORDS.--WSP 786: 1933-34. WSP 1280: 1922. WDR MO-83-1: 1981. WDR MO-93-1: 1991(M).

GAGE.--Water-stage recorder. Datum of gage is 707.56 ft above National Geodetic Vertical Datum of 1929. This figure supercedes figures published in reports from 1982 to 1992. Prior to Jan. 31, 1922, nonrecording gage at site 100 ft upstream at datum 5.00 ft lower; Jan. 31, 1922, to Nov. 15, 1936, nonrecording gage at site about 1,100 ft upstream at datum 4.83 ft lower; Nov. 16, 1936, to Nov. 14, 1937, nonrecording gage; Nov. 15, 1937, to Sept. 21, 1961, water-stage recorder on center pier of highway bridge at datum 5.00 ft lower; Sept. 22-27, 1961, nonrecording gage at railroad bridge 100 ft upstream at datum 5.00 ft lower; Sept. 28, 1961, to Mar. 4, 1964, water-stage recorder on downstream side of left bank pier of highway bridge and wire-weight gage for stages below 7.2 ft at datum 5.00 ft lower; Mar. 5, 1964, to Mar. 5, 1982, at present site at datum 5.00 ft. higher.

REMARKS.--Records good except for estimated daily discharges, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, about 45 ft, July 8, 1909, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	65	107	77	e24	e55	e45	363	1130	440	89	39	28
2	59	100	75	e23	e50	e50	250	828	347	79	35	26
3	55	103	73	e23	e50	e42	186	634	288	73	34	23
4	53	99	72	e22	e40	e35	150	498	250	71	32	21
5	62	94	72	e23	e55	e50	127	400	228	70	31	20
6	61	91	72	e24	72	e60	111	3240	212	67	30	19
7	96	89	74	e30	77	80	103	10000	199	76	29	18
8	141	84	71	e39	70	110	112	4320	183	72	27	16
9	134	80	69	40	81	276	450	2170	166	62	26	14
10	112	77	68	45	117	334	750	1590	155	57	25	14
11	94	74	67	45	139	238	575	12200	166	55	26	13
12	123	73	71	52	148	196	1320	26100	2150	63	26	13
13	138	73	88	56	146	180	2780	13800	2290	179	32	13
14	129	74	98	62	137	162	1100	5470	1180	130	36	14
15	138	73	107	58	130	142	606	3350	600	168	32	15
16	286	74	105	67	132	124	410	2340	360	152	38	14
17	361	73	96	55	135	111	312	1720	247	116	47	13
18	234	73	89	58	133	101	247	1380	197	92	40	14
19	162	70	84	67	137	94	211	1160	166	78	37	18
20	125	71	80	57	158	87	1170	923	152	69	50	20
21	108	68	75	63	183	81	1460	746	131	63	53	19
22	97	68	73	68	191	75	2340	625	120	59	61	17
23	148	68	70	69	176	71	1420	548	107	56	99	17
24	790	72	e50	74	151	66	803	557	99	52	76	17
25	662	79	e38	66	128	68	553	1950	90	50	78	15
26	369	83	e28	66	106	76	932	1840	85	52	83	15
27	234	88	e27	68	76	78	996	1130	88	56	61	14
28	176	88	e25	72	e56	88	5080	992	110	52	48	13
29	145	85	e27	72	---	107	4200	746	119	53	41	13
30	126	81	e28	51	---	311	1800	722	108	46	36	13
31	114	---	e24	44	---	528	---	677	---	42	31	---
MEAN	180	81.1	66.8	51.1	112	131	1031	3348	368	77.4	43.2	16.6
MAX	790	107	107	74	191	528	5080	26100	2290	179	99	28
MIN	53	68	24	22	40	35	103	400	85	42	25	13
IN.	0.09	0.04	0.03	0.03	0.05	0.07	0.51	1.72	0.18	0.04	0.02	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

	MEAN	821	856	525	482	1003	1735	1998	2032	2355	1611	521	1044
MAX	8965	8613	5463	4212	6196	8760	7906	14820	22670	33930	4136	11610	
(WY)	1974	1929	1983	1932	1962	1979	1927	1995	1947	1993	1987	1926	
MIN	3.09	8.18	6.15	3.94	5.61	18.7	12.0	15.4	51.9	13.3	7.05	10.2	
(WY)	1957	1939	1939	1940	1939	1938	1956	1956	1988	1936	1936	1955	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1921 - 2002
ANNUAL MEAN	1710	463	1247
HIGHEST ANNUAL MEAN			5740
LOWEST ANNUAL MEAN			129
HIGHEST DAILY MEAN	25800	Feb 25	85500
LOWEST DAILY MEAN	21	Jan 1	2.0
ANNUAL SEVEN-DAY MINIMUM	28	Dec 25	2.6
MAXIMUM PEAK FLOW	---		89800
MAXIMUM PEAK STAGE	---	27.22	41.50
INSTANTANEOUS LOW FLOW	---	12	2.0
ANNUAL RUNOFF (INCHES)	10.32	2.79	7.53
10 PERCENT EXCEEDS	5220	813	2540
50 PERCENT EXCEEDS	363	80	218
90 PERCENT EXCEEDS	60	25	28

e Estimated

## GRAND RIVER BASIN

06898100 THOMPSON RIVER NEAR MOUNT MORIAH, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°20'11", long 93°46'02", in NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec.24, T.64 N., R.26 W., Harrison County, Hydrologic Unit 10280102, on Highway 136 approximately 15 mi east of junction I-35 and Highway 136, 1.5 mi northeast of Mt. Moriah.

DRAINAGE AREA.--891 mi<sup>2</sup>, including Panther Creek.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 08...	0920	ENVIRONMENTAL	41	10.8	98	8.4	467	10.5	210	64.2	12.5	4.43		
JAN 17...	1030	ENVIRONMENTAL	14	13.2	94	8.0	524	.5	--	--	--	--		
MAR 14...	0945	ENVIRONMENTAL	91	11.2	98	8.2	411	7.5	--	--	--	--		
MAY 09...	1045	ENVIRONMENTAL	223	9.8	103	8.3	386	16.5	170	53.0	10.3	4.06		
AUG 01...	0910	ENVIRONMENTAL	26	6.8	89	8.1	442	27.0	--	--	--	--		
01...	0911	REPLICATE	--	--	--	--	--	--	--	--	--	--		
SEP 03...	1445	ENVIRONMENTAL	17	8.1	111	8.2	474	30.5	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, DIS-SOLVED (mg/L as N) (00631)
NOV 08...	11.2	194	192	228	3	11.4	.2	40.8	14	270	<.04	.30	<.05	
JAN 17...	--	218	217	265	0	--	--	--	<10	--	.11	.36	.38	
MAR 14...	--	152	150	183	0	--	--	--	43	--	E.03	.74	1.20	
MAY 09...	7.83	159	156	190	0	8.58	.3	34.6	347	230	<.04	1.3	.56	
AUG 01...	--	183	183	223	0	--	--	--	30	--	<.04	.54	<.05	
01...	--	--	--	--	--	--	--	--	13	--	<.04	.56	<.05	
SEP 03...	--	193	193	235	0	--	--	--	176	--	<.04	.80	<.05	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 08...	<.008	<.06	<.02	E.06	K32	130	230	4	109	.6	E.03	<.1	<6	
JAN 17...	.009	<.06	<.02	E.03	K1	K3	K9	--	--	--	--	--	--	
MAR 14...	.020	E.03	<.02	.10	K8	K13	150	--	--	--	--	--	--	
MAY 09...	.008	.06	.04	.39	2500	3600	5500	2	3580	1.2	<.04	E.1	<6	
AUG 01...	<.008	<.06	E.01	.12	73	150	140	--	--	--	--	--	--	
01...	<.008	E.03	E.01	.12	--	--	--	--	--	--	--	--	--	
SEP 03...	<.008	E.03	E.01	.30	K69	210	97	--	--	--	--	--	--	

06898100 THOMPSON RIVER NEAR MOUNT MORIAH, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 08...	15	<.08	<1	424	<.01	E.2	3	4
JAN 17...	--	--	--	--	--	--	--	--
MAR 14...	--	--	--	--	--	--	--	--
MAY 09...	<10	<.08	6	30.5	.02	1.0	<1	19
AUG 01...	--	--	--	--	--	--	--	--
01...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## GRAND RIVER BASIN

06898800 WELDON RIVER AT PRINCETON, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°24'03", long 93°36'10", in SW ¼ NW ¼ SE ¼ sec.28, T.65 N., R.24 W., Mercer County, Hydrologic Unit 10280102, approximately 1 mi west of Princeton on US Highway 136.

DRAINAGE AREA.--452 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 06...	1330	ENVIRONMENTAL		36	10.3	108	8.2	409	16.5	180	53.4	10.9	6.01	
JAN 15...	1355	ENVIRONMENTAL		20	14.2	101	8.2	516	.5	--	--	--	--	
MAR 12...	1320	ENVIRONMENTAL		101	12.0	102	8.2	382	7.0	--	--	--	--	
MAY 07...	1400	ENVIRONMENTAL		527	7.7	89	7.9	287	21.0	130	40.0	7.26	4.70	
07...	1515	BLANK		--	--	--	--	--	--	.04	<.008	<.10		
JUL 30...	1405	ENVIRONMENTAL		17	9.1	136	8.4	393	35.5	--	--	--	--	
AUG 15...	1225	ENVIRONMENTAL		8.7	10.4	135	8.3	425	27.0	--	--	--	--	
SEP 05...	0845	ENVIRONMENTAL		3.3	7.3	81	8.1	489	19.0	--	--	--	--	
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, PENDEDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 06...	10.0	166	168	206	0	11.6	.2	29.5	18	248	<.04	.52	.08	
JAN 15...	--	218	221	270	0	--	--	--	<10	--	.10	.41	.16	
MAR 12...	--	143	143	175	0	--	--	--	114	--	.09	1.1	1.45	
MAY 07...	5.24	116	116	141	0	6.37	.2	22.4	210	177	.04	1.7	.61	
07...	E.06	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05	
JUL 30...	--	160	160	188	4	--	--	--	14	--	<.04	.47	<.05	
AUG 15...	--	180	180	220	0	--	--	--	20	--	<.04	.49	<.05	
SEP 05...	--	209	210	256	0	--	--	--	13	--	<.04	.40	<.05	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 06...	<.008	E.05	.04	.10	K26	77	K40	5	177	.9	E.02	<.1	<6	
JAN 15...	E.004	<.06	<.02	<.06	K15	K4	46	--	--	--	--	--	--	
MAR 12...	.016	E.04	.02	.21	K90	160	360	--	--	--	--	--	--	
MAY 07...	.025	.07	.05	.50	K19000	K18000	4700	8	4940	1.1	<.04	.2	E3	
07...	<.008	<.06	<.02	<.06	--	--	--	4	6	<.2	<.04	<.1	<6	
JUL 30...	<.008	<.06	<.02	.07	150	100	140	--	--	--	--	--	--	
AUG 15...	<.008	<.06	<.02	.07	160	270	160	--	--	--	--	--	--	
SEP 05...	<.008	<.06	<.02	E.04	K9	130	140	--	--	--	--	--	--	

06898800 WELDON RIVER AT PRINCETON, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 06...	<10	<.08	<1	176	<.01	E.2	2	2
JAN 15...	--	--	--	--	--	--	--	--
MAR 12...	--	--	--	--	--	--	--	--
MAY 07...	17	<.08	9	7.4	.03	.9	<1	24
07...	<10	<.08	<1	<2.0	<.01	<.3	2	<1
JUL 30...	--	--	--	--	--	--	--	--
AUG 15...	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## GRAND RIVER BASIN

06899500 THOMPSON RIVER AT TRENTON, MO

LOCATION.--Lat 40°04'10", long 93°38'16" in SW ¼ NE ¼ sec.19, T.61 N., R.24 W., Grundy County, Hydrologic Unit 10280102, at downstream side of bridge pier in Trenton, 2.6 mi downstream from Weldon River, and at mile 25.2.

DRAINAGE AREA.--1,720 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--June 1921 to September 1923, August 1928 to current year. June 1921 to September 1923, published as "near Hickory". Monthly discharge only for some periods, published in WSP 1310. Gage-height records collected in vicinity 1910-14 and since 1925 in reports of the National Weather Service.

REVISED RECORDS.--WSP 1116: 1945(M). WDR MO-83-1: 1981.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 721.87 ft above National Geodetic Vertical Datum of 1929. June 25, 1921, to Aug. 26, 1923, nonrecording gage at two sites 12 mi downstream (by old channel route) at different datums; Aug. 1, 1928, to Sept. 15, 1930, nonrecording gage at site 0.8 mi upstream from current site at current datum; Sept. 16, 1930, to May 31 1945, nonrecording gage at site 0.7 mi downstream at datum 3.46 ft lower; June 1, 1945, to Dec. 7, 1959, nonrecording gage at same site and datum; Dec. 8, 1959 to Oct. 27, 1998 at site 0.8 mi upstream, at same datum.

REMARKS.--Records good except for estimated daily discharges and those above 6,000 ft<sup>3</sup>/s, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 30.7 ft, July 6, 1909, present site and datum, from information by local residents; discharge, 50,000 ft<sup>3</sup>/s, determined by the U.S. Army Corps of Engineers, occurred before new channel was dredged.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62	196	82	e34	e60	e60	295	880	392	93	58	46
2	61	187	82	e33	e52	e65	222	669	354	89	54	43
3	56	148	76	e33	e50	e55	175	531	317	89	52	38
4	56	126	72	e31	e60	e47	145	445	291	87	51	34
5	77	114	70	e32	e65	e65	128	387	275	86	47	33
6	170	106	68	e35	e75	e90	118	7000	261	85	49	33
7	179	101	71	e45	96	127	115	4120	247	81	66	36
8	123	94	75	51	79	276	142	1600	228	84	82	35
9	98	92	74	51	100	374	1280	1970	216	81	71	31
10	89	91	71	57	135	616	1100	1400	205	84	65	28
11	82	88	66	65	130	496	545	16200	203	99	58	27
12	103	87	74	69	150	345	3950	19700	301	163	53	27
13	121	81	104	68	161	280	1490	6620	613	129	65	29
14	88	79	128	77	154	242	649	3380	348	103	72	32
15	113	77	124	66	155	215	461	2080	248	133	59	32
16	208	75	112	76	163	186	344	1530	245	178	111	28
17	121	73	98	58	159	164	284	1820	290	130	70	26
18	91	74	89	61	157	150	239	1490	220	102	63	26
19	73	71	83	74	183	141	1260	1150	188	91	54	30
20	64	69	79	68	306	132	758	914	166	83	85	36
21	64	72	78	77	374	122	2300	756	150	77	278	35
22	191	78	79	73	261	117	1320	647	139	73	204	30
23	575	77	71	82	212	110	661	584	131	73	161	28
24	1320	82	e45	72	183	112	440	578	122	64	110	38
25	629	86	e35	68	159	110	825	1390	117	60	81	39
26	388	88	e34	74	109	106	490	1520	110	62	64	34
27	260	84	e34	80	e90	118	2770	1060	110	69	54	31
28	199	81	e32	82	e70	131	6770	790	104	63	50	32
29	163	79	e35	82	---	182	2240	648	101	74	48	30
30	139	80	e37	56	---	996	1220	530	97	64	47	30
31	125	---	e35	48	---	494	---	442	---	63	48	---
MEAN	196	94.5	71.4	60.6	141	217	1091	2672	226	90.7	78.4	32.6
MAX	1320	196	128	82	374	996	6770	19700	613	178	278	46
MIN	56	69	32	31	50	47	115	387	97	60	47	26
IN.	0.14	0.06	0.05	0.04	0.09	0.15	0.73	1.85	0.15	0.06	0.05	0.02

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	582	650	470	456	924	1595	1735	1790	1817	1078	509	679
MAX	4678	6280	4209	3682	4378	5765	5580	8757	16460	18860	3990	8443	
(WY)	1974	1962	1983	1946	1962	1979	1973	1995	1947	1993	1959	1992	
MIN	11.1	9.53	6.48	4.74	13.0	17.6	10.7	10.2	13.9	6.00	9.32	12.9	
(WY)	1957	1956	1956	1956	1956	1938	1956	1956	1956	1934	1936	1955	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	1402	417	1022
HIGHEST ANNUAL MEAN			3576
LOWEST ANNUAL MEAN			117
HIGHEST DAILY MEAN	20100	Jun 6	73800 Jun 6 1947
LOWEST DAILY MEAN	19	Jan 1, 2	1.0 Jun 17 1956
ANNUAL SEVEN-DAY MINIMUM	22	Jan 1	1.7 Aug 4 1934
MAXIMUM PEAK FLOW	---	33800	May 11 95000 Jun 6 1947
MAXIMUM PEAK STAGE	---	15.31	May 11 25.70 Jun 6 1947
INSTANTANEOUS LOW FLOW	---	25 Sep 16-18, 23	1.0 Jun 17 1956
ANNUAL RUNOFF (INCHES)	11.40	3.39	8.32
10 PERCENT EXCEEDS	4280	704	2350
50 PERCENT EXCEEDS	281	91	214
90 PERCENT EXCEEDS	62	36	30

e Estimated

## GRAND RIVER BASIN

145

06899580 NO CREEK NEAR DUNLAP, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°06'19", long 93°29'29", in SE ¼ SE ¼ SW ¼ sec.4, T.61 N., R.23 W., Grundy County, Hydrologic Unit 10280102, on upstream side of bridge on County Road N approximately 0.6 mi west of Dunlap.

DRAINAGE AREA.--34.0 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1997 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 23...	1350	ENVIRONMENTAL	38	6.0	64	7.8	229	16.0	--	--	--	--
NOV 29...	1245	ENVIRONMENTAL	.28	12.8	102	8.2	410	4.5	170	48.2	12.9	6.36
DEC 13...	1440	ENVIRONMENTAL	1.0	12.3	102	8.3	414	6.0	--	--	--	--
13...	1441	REPLICATE	--	--	--	--	--	--	--	--	--	--
FEB 28...	1400	ENVIRONMENTAL	1.7	14.6	105	8.1	359	1.0	--	--	--	--
MAR 21...	1010	ENVIRONMENTAL	2.1	13.7	105	7.9	386	4.0	--	--	--	--
APR 18...	1130	ENVIRONMENTAL	4.3	9.1	107	8.2	371	21.5	--	--	--	--
MAY 23...	0915	ENVIRONMENTAL	2.4	8.5	91	8.0	361	17.0	160	45.1	10.6	2.94
JUN 13...	1120	ENVIRONMENTAL	.53	8.8	107	8.2	414	23.5	170	49.9	12.3	4.04
28...	1340	ENVIRONMENTAL	.07	12.8	167	8.5	507	27.5	--	--	--	--
JUL 23...	1130	ENVIRONMENTAL	.01	11.7	140	8.3	738	23.0	260	71.8	19.3	22.6
23...	1130	BLANK	--	--	--	--	--	--	--	.02	<.008	<.10
AUG 22...	1340	ENVIRONMENTAL	1.0	5.1	64	7.8	217	25.5	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 23...	--	124	125	153	0	--	--	--	386	--	<.04	2.2	.10
NOV 29...	18.8	189	185	226	0	8.84	.2	25.9	78	264	E.04	1.1	<.05
DEC 13...	--	190	190	226	3	--	--	--	20	--	<.04	.45	<.05
13...	--	--	--	--	--	--	--	--	16	--	<.04	.47	<.05
FEB 28...	--	123	121	148	0	--	--	--	22	--	<.04	.52	.64
MAR 21...	--	141	143	174	0	--	--	--	<10	--	<.04	.43	<.05
APR 18...	--	134	132	161	0	--	--	--	36	--	<.04	.67	.07
MAY 23...	14.2	144	143	174	0	7.27	.2	36.5	<10	226	<.04	.46	E.04
JUN 13...	19.4	175	175	214	0	6.94	.2	31.7	20	247	E.04	.56	.08
28...	--	216	216	249	7	--	--	--	40	--	<.04	.62	<.05
JUL 23...	38.5	341	339	397	8	17.2	.4	38.0	<10	446	5.91	8.0	E.03
23...	<.09	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05
AUG 22...	--	90	90	110	0	--	--	--	44	--	.50	5.4	1.87

## GRAND RIVER BASIN

06899580 NO CREEK NEAR DUNLAP, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 23...	<.008	.12	.10	.72	K37000	K29000	K31000	--	--	--	--	--	--
NOV 29...	<.008	E.04	.02	.19	K3900	K4000	1900	1	1500	1.4	<.04	<.1	<6
DEC 13...	<.008	E.06	.05	.10	K470	800	2600	--	--	--	--	--	--
13...	<.008	E.06	.05	.10	--	--	--	--	--	--	--	--	--
FEB 28...	.012	<.06	<.02	.07	K7	K3	80	--	--	--	--	--	--
MAR 21...	<.008	<.06	<.02	E.03	K47	34	48	--	--	--	--	--	--
APR 18...	.008	E.04	.03	.12	K93	150	223	--	--	--	--	--	--
MAY 23...	<.008	E.04	.02	.07	160	130	230	2	112	1.3	<.04	<.1	<6
JUN 13...	E.005	E.05	.04	.10	670	1100	600	2	336	1.8	<.04	<.1	<6
28...	<.008	.06	.04	.11	510	350	290	--	--	--	--	--	--
JUL 23...	.018	.06	E.01	.17	380	320	190	2	164	7.1	.04	<.1	<6
23...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	<.1	<6
AUG 22...	.128	E.04	<.02	.91	K15000	K16000	4000	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 23...	--	--	--	--	--	--	--	--
NOV 29...	E6	<.08	4	521	E.01	E.3	<1	6
DEC 13...	--	--	--	--	--	--	--	--
13...	--	--	--	--	--	--	--	--
FEB 28...	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--
APR 18...	--	--	--	--	--	--	--	--
MAY 23...	E6	<.08	<1	109	<.01	.5	1	2
JUN 13...	E6	<.08	M	129	<.01	.5	4	4
28...	--	--	--	--	--	--	--	--
JUL 23...	75	.09	M	3580	<.01	.9	<1	4
23...	<10	<.08	<1	<2.0	<.01	<.3	<1	6
AUG 22...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.



06899950 MEDICINE CREEK AT HARRIS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°18'32", long 93°20'15", in NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  sec.35, T.64 N., R.22 W., Sullivan County, Hydrologic Unit 10280103, on the left bank on upstream side of the bridge on State Highway E, approximately 0.6 mi east of Harris.

DRAINAGE AREA.--192 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 25...	1450	ENVIRONMENTAL	33	10.3	96	8.0	285	11.0	--	--	--	--
NOV 28...	0910	ENVIRONMENTAL	3.4	12.8	97	8.0	468	3.0	220	65.1	14.5	4.00
DEC 12...	1055	ENVIRONMENTAL	6.2	12.6	103	8.0	466	5.5	--	--	--	--
JAN 03...	1200	ENVIRONMENTAL	4.6	9.8	69	7.5	608	.5	--	--	--	--
08...	1610	ENVIRONMENTAL	5.0	12.1	87	7.5	534	.5	240	70.9	15.7	3.15
FEB 27...	0955	ENVIRONMENTAL	9.9	13.7	96	8.1	460	.5	--	--	--	--
MAR 19...	1645	ENVIRONMENTAL	18	10.9	98	8.1	448	9.5	--	--	--	--
APR 17...	0945	ENVIRONMENTAL	68	8.8	98	8.1	364	19.0	--	--	--	--
MAY 21...	1420	ENVIRONMENTAL	38	9.1	99	8.1	404	18.5	190	55.1	11.6	3.63
JUN 28...	1105	ENVIRONMENTAL	5.6	9.4	116	7.9	495	24.5	--	--	--	--
JUL 24...	1030	ENVIRONMENTAL	3.6	7.7	92	7.8	487	23.4	210	62.8	13.3	3.52
AUG 21...	1345	ENVIRONMENTAL	17	9.7	124	8.3	414	26.0	--	--	--	--
SEP 10...	0938	ENVIRONMENTAL	1.4	7.6	89	7.9	467	21.5	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 25...	--	99	98	121	0	--	--	--	118	--	E.03	1.4	1.17
NOV 28...	15.5	192	191	234	0	8.86	.2	58.4	12	308	.05	.33	E.02
DEC 12...	--	184	182	223	0	--	--	--	--	--	<.04	.28	<.05
JAN 03...	--	162	159	194	0	--	--	--	<10	--	.15	.48	.07
08...	18.7	313	311	379	0	10.5	.2	64.3	<10	340	.12	.41	E.04
FEB 27...	--	172	172	209	0	--	--	--	12	--	E.04	.57	.68
MAR 19...	--	172	170	207	0	--	--	--	<10	--	<.04	.40	<.05
APR 17...	--	134	134	163	0	--	--	--	130	--	<.04	.92	.47
MAY 21...	10.7	156	154	188	0	7.37	.2	43.0	38	262	<.04	.51	.54
JUN 28...	--	180	182	222	0	--	--	--	13	--	<.04	.47	<.05
JUL 24...	15.4	174	173	211	0	10.7	.2	62.0	<10	297	<.04	.53	<.05
AUG 21...	--	163	164	195	2	--	--	--	41	--	<.04	.67	<.05
SEP 10...	--	160	161	196	0	--	--	--	<10	--	E.03	.33	<.05

## GRAND RIVER BASIN

06899950 MEDICINE CREEK AT HARRIS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 25...	.012	.13	.10	.37	K4800	K5000	1400	--	--	--	--	--	--
NOV 28...	<.008	<.06	<.02	E.03	220	160	140	5	83	.6	E.02	<.1	<6
DEC 12...	<.008	<.06	<.02	<.06	K153	120	310	--	--	--	--	--	--
JAN 03...	<.008	<.06	<.02	<.06	27	21	K9	--	--	--	--	--	--
08...	<.008	<.06	<.02	<.06	K17	K9	K19	4	20	.6	.07	<.1	<6
FEB 27...	.008	<.06	E.01	.07	K18	K10	52	--	--	--	--	--	--
MAR 19...	<.008	<.06	E.01	.06	<1	K10	K35	--	--	--	--	--	--
APR 17...	.010	E.06	.05	.24	K100	97	311	--	--	--	--	--	--
MAY 21...	.009	E.04	.03	.10	71	120	110	2	429	.8	E.02	<.1	<6
JUN 28...	<.008	<.06	<.02	E.06	210	260	210	--	--	--	--	--	--
JUL 24...	<.008	<.06	<.02	.08	K170	130	160	3	195	1.0	.04	<.1	<6
AUG 21...	<.008	<.06	.02	.14	600	660	510	--	--	--	--	--	--
SEP 10...	<.008	<.06	E.01	E.05	K26	590	220	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 25...	--	--	--	--	--	--	--	--
NOV 28...	E9	<.08	<1	1940	<.01	.3	3	4
DEC 12...	--	--	--	--	--	--	--	--
JAN 03...	--	--	--	--	--	--	--	--
08...	114	<.08	<1	4110	<.01	E.2	3	3
FEB 27...	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--
APR 17...	--	--	--	--	--	--	--	--
MAY 21...	<10	E.04	1	97.2	<.01	.7	<1	4
JUN 28...	--	--	--	--	--	--	--	--
JUL 24...	15	<.08	<1	1460	<.01	E.2	1	3
AUG 21...	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

06900050 MEDICINE CREEK AT LAREDO, MO

LOCATION.--Lat 40°01'36", long 93°26'09", in SW 1/4 NW 1/4 SE 1/4 sec.12, T.60 N., R.23 W., Grundy County, Hydrologic Unit 10280103, on downstream side of Highway E bridge, approximately 0.5 mi east of Laredo.

DRAINAGE AREA.--355 mi<sup>2</sup>.

PERIOD OF RECORD.--November 14, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	13	14	e6.4	e9.0	e35	137	243	69	e14	12	6.0
2	12	18	12	e6.2	e8.7	e25	110	181	59	13	9.7	5.7
3	11	16	12	e6.1	e8.3	e15	87	142	51	13	8.1	5.5
4	12	14	12	e5.9	e9.0	e15	67	117	49	13	7.5	5.3
5	18	12	12	e6.1	e10	e20	57	100	47	12	7.7	5.1
6	16	12	12	e6.3	16	e40	50	3720	41	12	13	5.0
7	16	12	12	e6.1	17	50	52	2440	37	12	13	5.0
8	19	12	12	e6.1	15	64	69	651	34	12	9.0	4.8
9	16	12	12	e6.5	32	124	764	1790	31	12	7.7	5.0
10	15	12	11	e7.0	96	152	e479	978	34	16	7.2	4.8
11	15	11	11	9.2	62	106	e238	7040	36	17	7.0	4.6
12	15	11	14	10	55	83	e572	9050	39	32	6.6	4.6
13	14	11	26	11	59	71	e746	1550	36	34	11	4.6
14	17	10	35	12	58	60	e287	555	56	17	15	5.6
15	37	9.5	58	11	61	52	e189	324	44	12	10	5.5
16	56	10	38	12	57	44	e153	230	36	11	89	5.0
17	22	12	29	11	46	37	e141	192	28	9.9	30	5.0
18	16	11	22	11	44	33	e126	171	26	9.5	12	5.5
19	14	11	19	12	96	32	e117	144	25	9.3	10	6.1
20	14	10	17	11	207	31	e117	119	22	9.2	77	6.7
21	14	9.3	16	13	248	26	1460	102	20	8.7	50	6.7
22	20	9.1	16	12	132	21	466	91	20	8.3	29	6.6
23	194	9.1	14	17	93	22	236	95	18	9.1	33	5.8
24	348	9.5	e8.5	12	76	23	160	126	18	8.7	17	4.9
25	120	15	e8.0	11	62	26	313	518	17	8.5	11	4.7
26	65	19	e7.5	14	e40	27	246	465	16	8.3	8.7	4.4
27	43	14	e7.5	18	e25	27	2220	223	e17	8.3	7.8	4.4
28	28	12	e7.5	17	e25	36	3290	148	e19	9.1	7.0	4.5
29	19	10	e8.0	16	---	52	800	116	e18	12	6.6	4.8
30	15	11	e7.5	9.6	---	409	350	95	e16	10	6.4	4.2
31	13	---	e6.5	e9.2	---	238	---	80	---	12	6.2	---
MEAN	40.2	11.9	16.0	10.4	59.5	64.4	470	1026	32.6	12.7	17.6	5.21
MAX	348	19	58	18	248	409	3290	9050	69	34	89	6.7
MIN	11	9.1	6.5	5.9	8.3	15	50	80	16	8.3	6.2	4.2

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

MEAN	40.2	11.9	11.0	75.9	515	462	487	909	670	132	24.1	12.9
MAX	40.2	11.9	16.0	141	971	860	504	1026	1307	252	30.5	20.6
(WY)	2002	2002	2002	2001	2001	2001	2001	2002	2001	2001	2001	2001
MIN	40.2	11.9	5.97	10.4	59.5	64.4	470	793	32.6	12.7	17.6	5.21
(WY)	2002	2002	2001	2002	2002	2002	2002	2001	2002	2002	2002	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2001 - 2002

ANNUAL MEAN	407	148	148
HIGHEST ANNUAL MEAN			148
LOWEST ANNUAL MEAN			148
HIGHEST DAILY MEAN	7780	Jun 6	9050 May 12 2002
LOWEST DAILY MEAN	3.8	Jan 2	4.2 Sep 30 2000
ANNUAL SEVEN-DAY MINIMUM	4.2	Jan 1	4.6 Sep 24 2000
MAXIMUM PEAK FLOW	---		13900 <sup>a</sup> May 12 2002
MAXIMUM PEAK STAGE	---		17.95 May 12 2002
INSTANTANEOUS LOW FLOW	---		4.0 Sep 12,26,27,30 2000
10 PERCENT EXCEEDS	925		193
50 PERCENT EXCEEDS	62		16
90 PERCENT EXCEEDS	11		6.4

e Estimated

<sup>a</sup> From rating extended above 8,510 ft<sup>3</sup>/s.

## GRAND RIVER BASIN

06900100 LITTLE MEDICINE CREEK NEAR HARRIS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°19'02", long 93°22'52", in SW  $\frac{1}{4}$  SE  $\frac{1}{4}$  NW  $\frac{1}{4}$  sec.28, T.64 N., R.22 W., Mercer County, Hydrologic Unit 10280103, on the left bank on upstream side of bridge on State Highway E, approximately 1.7 mi west of Harris.

DRAINAGE AREA.--66.5 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1997 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)		
OCT 25...	1030	ENVIRONMENTAL	7.5	10.9	91	8.0	310	6.5	--	--	--	--		
NOV 28...	1210	ENVIRONMENTAL	1.5	13.8	105	8.2	453	3.0	200	57.3	12.9	4.88		
DEC 12...	1420	ENVIRONMENTAL	1.7	13.2	110	8.3	472	6.0	--	--	--	--		
JAN 08...	1155	ENVIRONMENTAL	.38	7.3	53	7.3	599	.5	270	80.1	17.5	3.84		
FEB 27...	1425	ENVIRONMENTAL	1.8	12.5	90	7.8	460	1.0	--	--	--	--		
27...	1426	REPLICATE	--	--	--	--	--	--	--	--	--	--		
MAR 19...	1315	ENVIRONMENTAL	2.0	12.2	113	8.4	434	10.5	--	--	--	--		
APR 17...	1220	ENVIRONMENTAL	13	8.8	108	8.2	397	24.0	--	--	--	--		
MAY 21...	1205	ENVIRONMENTAL	9.1	10.4	108	8.2	422	16.5	200	58.5	12.1	3.67		
JUN 28...	0840	ENVIRONMENTAL	2.0	8.6	99	8.0	497	20.5	--	--	--	--		
JUL 24...	1300	ENVIRONMENTAL	.59	10.1	135	8.1	485	29.0	210	62.1	12.6	4.54		
AUG 21...	0910	ENVIRONMENTAL	3.1	7.4	89	8.1	388	23.0	--	--	--	--		
SEP 10...	1330	ENVIRONMENTAL	.15	11.6	153	8.1	424	28.0	--	--	--	--		
DATE		SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE D (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, DIS- SOLVED (mg/L as N) (00631)
OCT 25...	--	112	110	134	0	--	--	--	54	--	.05	1.1	1.06	
NOV 28...	15.0	185	182	223	0	11.1	.2	49.8	<10	280	<.04	.27	<.05	
DEC 12...	--	182	184	225	0	--	--	--	<10	--	<.04	.25	<.05	
JAN 08...	21.4	372	371	452	0	12.1	.2	70.1	<10	382	.39	.67	.13	
FEB 27...	--	171	171	209	0	--	--	--	<10	--	.13	.46	.78	
27...	--	--	--	--	--	--	--	--	<10	--	.12	.45	.76	
MAR 19...	--	158	158	184	5	--	--	--	<10	--	E.02	.34	<.05	
APR 17...	--	140	141	172	0	--	--	--	66	--	<.04	.60	.43	
MAY 21...	10.9	166	165	201	0	7.37	.2	46.1	14	267	E.03	.38	.29	
JUN 28...	--	197	197	240	0	--	--	--	<10	--	.05	.41	E.03	
JUL 24...	14.9	182	182	222	0	7.64	.3	57.3	<10	290	<.04	.35	<.05	
AUG 21...	--	155	155	189	0	--	--	--	<10	--	<.04	.56	.06	
SEP 10...	--	157	156	191	0	--	--	--	<10	--	<.04	.27	<.05	

06900100 LITTLE MEDICINE CREEK NEAR HARRIS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 25...	E.005	.08	.06	.20	910	1000	2500	--	--	--	--	--	--
NOV 28...	<.008	<.06	<.02	<.06	K45	K55	110	3	18	.4	<.04	<.1	<6
DEC 12...	<.008	<.06	<.02	<.06	150	170	250	--	--	--	--	--	--
JAN 08...	E.005	<.06	<.02	<.06	K10	K7	45	4	14	.6	.07	<.1	<6
FEB 27...	.008	<.06	<.02	E.03	K3	K2	K8	--	--	--	--	--	--
FEB 27...	.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
MAR 19...	<.008	<.06	<.02	<.06	K10	K21	40	--	--	--	--	--	--
APR 17...	.009	.06	.05	.13	190	130	340	--	--	--	--	--	--
MAY 21...	E.006	E.04	.02	.07	62	56	110	2	201	.8	<.04	<.1	<6
JUN 28...	<.008	<.06	E.01	E.04	930	K970	900	--	--	--	--	--	--
JUL 24...	E.005	<.06	E.01	E.04	140	170	190	1	56	.9	E.03	<.1	<6
AUG 21...	E.007	E.03	E.01	.10	1100	1300	1500	--	--	--	--	--	--
SEP 10...	<.008	<.06	<.02	E.04	K160	190	170	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 25...	--	--	--	--	--	--	--	--
NOV 28...	59	<.08	<1	1530	<.01	E.3	2	5
DEC 12...	--	--	--	--	--	--	--	--
JAN 08...	561	<.08	<1	6400	<.01	.3	3	2
FEB 27...	--	--	--	--	--	--	--	--
FEB 27...	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--
APR 17...	--	--	--	--	--	--	--	--
MAY 21...	<10	<.08	<1	97.8	<.01	.8	<1	3
JUN 28...	--	--	--	--	--	--	--	--
JUL 24...	E10	<.08	<1	679	<.01	<.3	<1	2
AUG 21...	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## GRAND RIVER BASIN

06900900 LOCUST CREEK NEAR UNIONVILLE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°28'23", long 93°07'37", in SW ¼ SW ¼ SW ¼ sec.35, T.66 N., R.20 W., Putnam County, Hydrologic Unit 10280103, on left bank on upstream side of bridge on Highway HH approximately 3.2 mi west of State Highway 5, 9.4 mi south of Unionville.

DRAINAGE AREA.--77.5 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 24...	0950	ENVIRONMENTAL	59	8.1	82	7.8	286	13.5	--	--	--	--
NOV 27...	1250	ENVIRONMENTAL	4.4	16.0	129	8.4	486	5.0	230	66.8	15.7	4.69
DEC 11...	1350	ENVIRONMENTAL	3.1	14.6	113	8.4	491	3.5	--	--	--	--
JAN 02...	1525	ENVIRONMENTAL	.66	11.4	81	7.7	718	.5	--	--	--	--
09...	0955	ENVIRONMENTAL	.94	9.5	69	7.7	680	.5	330	93.6	22.4	4.36
FEB 26...	1350	ENVIRONMENTAL	9.2	14.6	104	8.2	464	.5	--	--	--	--
MAR 20...	1040	ENVIRONMENTAL	8.8	12.5	103	8.3	474	6.0	--	--	--	--
APR 16...	1315	ENVIRONMENTAL	27	8.8	106	8.2	425	22.5	--	--	--	--
MAY 22...	1305	ENVIRONMENTAL	16	9.6	101	8.1	433	16.5	200	59.9	12.3	3.45
22...	1330	BLANK	--	--	--	--	--	--	--	.02	<.008	<.10
JUN 27...	1145	ENVIRONMENTAL	1.6	8.3	103	8.2	481	24.5	--	--	--	--
JUL 25...	0945	ENVIRONMENTAL	.52	6.9	82	8.1	497	22.0	220	64.6	14.0	4.77
AUG 20...	1410	ENVIRONMENTAL	14	7.8	95	8.1	322	23.5	--	--	--	--
SEP 09...	1330	ENVIRONMENTAL	.05	9.6	123	8.1	451	26.5	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 24...	--	97	96	117	0	--	--	--	192	--	<.04	1.7	.90
NOV 27...	15.2	210	209	248	4	8.94	.2	50.3	<10	306	<.04	.37	<.05
DEC 11...	--	210	207	247	3	--	--	--	--	--	<.04	.31	<.05
JAN 02...	--	324	321	392	0	--	--	--	<10	--	.11	.58	.06
09...	26.0	435	435	531	0	13.3	.2	70.7	<10	436	.10	.48	.07
FEB 26...	--	171	170	207	0	--	--	--	28	--	E.04	.53	.76
MAR 20...	--	188	187	228	0	--	--	--	<10	--	E.03	.39	<.05
APR 16...	--	159	161	196	0	--	--	--	120	--	<.04	.51	.26
MAY 22...	11.4	172	172	210	0	7.07	.2	44.4	15	277	<.04	.48	.30
22...	<.09	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05
JUN 27...	--	184	188	229	0	--	--	--	13	--	<.04	.54	.09
JUL 25...	17.5	224	227	277	0	9.21	.3	28.7	<10	299	.07	.60	.13
AUG 20...	--	135	134	164	0	--	--	--	52	--	E.03	.96	.15
SEP 09...	--	204	202	247	0	--	--	--	18	--	<.04	.58	.06

06900900 LOCUST CREEK NEAR UNIONVILLE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 24...	.009	.11	.09	.43	K21000	11000	K36000	--	--	--	--	--	--
NOV 27...	<.008	<.06	<.02	E.04	120	K74	K100	3	36	.7	<.04	<.1	<6
DEC 11...	<.008	<.06	<.02	<.06	K32	K32	120	--	--	--	--	--	--
JAN 02...	<.008	<.06	<.02	<.06	K17	K17	K18	--	--	--	--	--	--
09...	<.008	<.06	<.02	<.06	K10	K12	65	4	14	.7	E.03	<.1	<6
FEB 26...	.009	<.06	<.02	.06	K10	K27	100	--	--	--	--	--	--
MAR 20...	<.008	E.04	.04	E.04	K45	73	46	--	--	--	--	--	--
APR 16...	E.006	E.05	.04	.11	K210	280	290	--	--	--	--	--	--
MAY 22...	E.006	<.06	.02	.07	140	190	160	2	221	.8	<.04	<.1	<6
22...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	<.1	<6
JUN 27...	E.007	<.06	E.01	E.06	390	300	280	--	--	--	--	--	--
JUL 25...	.010	<.06	.02	.08	240	230	900	<1	347	1.3	E.03	<.1	<6
AUG 20...	E.005	E.03	.02	.18	2700	2100	4800	--	--	--	--	--	--
SEP 09...	E.006	<.06	E.02	.07	250	180	460	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 24...	--	--	--	--	--	--	--	--
NOV 27...	19	<.08	<1	535	<.01	E.3	2	3
DEC 11...	--	--	--	--	--	--	--	--
JAN 02...	--	--	--	--	--	--	--	--
09...	38	<.08	<1	2440	<.01	.5	1	1
FEB 26...	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--
APR 16...	--	--	--	--	--	--	--	--
MAY 22...	E7	<.08	M	147	<.01	.7	<1	2
22...	<10	<.08	<1	<2.0	<.01	<.3	<1	<1
JUN 27...	--	--	--	--	--	--	--	--
JUL 25...	<10	<.08	<1	702	<.01	.4	<1	4
AUG 20...	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## GRAND RIVER BASIN

06901500 LOCUST CREEK NEAR LINNEUS, MO

LOCATION.--Lat 39°53'45", long 93°14'10", in NW ¼ NE ¼ sec.34, T.59 N., R.21 W., Linn County, Hydrologic Unit 10280103, on right bank on upstream side of county road, 1 mi upstream from Boyer bridge, 1.5 mi upstream from Strawberry and Couch Creeks, 3 mi northwest of Linneus, and 5 mi downstream from West Locust Creek.

DRAINAGE AREA.--550 sq mi<sup>2</sup>.

REVISED RECORDS.--WSP 896: 1939.

PERIOD OF RECORD.--October 1928 to September 1972, July 2000 to current year. Prior to April 1929 monthly discharge only published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 692.61 ft above National Geodetic Vertical Datum of 1929. Prior to July 26, 1956, nonrecording gage at same site and datum.

REMARKS.--Records fair except for July through September and estimated daily discharges, which are poor. U.S.G.S satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1909 reached a discharge of about 18,000 ft<sup>3</sup>/s, determination by the Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e13	34	20	e15	e17	e45	122	458	145	e21	11	9.7
2	e13	30	20	e16	e18	e55	90	350	120	e19	12	9.2
3	e12	31	19	e14	e17	e50	73	280	103	e19	11	8.6
4	e13	30	e18	e11	e16	e40	59	229	91	e19	9.9	7.2
5	21	28	e18	e13	e17	e50	50	185	85	e20	9.7	6.8
6	21	26	18	e15	e19	e64	45	4480	77	e18	20	6.4
7	17	26	18	e15	e23	e83	43	4350	69	e15	19	6.2
8	16	24	18	e17	27	e96	49	1330	62	e13	14	5.6
9	15	23	18	e17	47	281	316	2010	56	e15	11	5.6
10	19	23	17	e19	119	300	742	1330	59	e35	10	5.5
11	18	23	17	e21	109	183	296	7820	81	e36	9.4	5.5
12	17	21	20	e22	123	132	184	17100	119	e65	9.1	5.4
13	15	24	33	26	110	113	521	9370	66	e43	12	5.2
14	14	22	45	28	113	100	275	2560	75	e26	12	5.8
15	70	22	45	26	110	87	174	1190	91	e19	13	6.4
16	e132	21	45	28	113	77	126	838	75	15	90	5.6
17	72	21	36	25	104	67	111	657	56	15	55	7.3
18	49	22	31	30	90	55	94	541	44	13	33	7.3
19	38	22	28	32	193	51	205	423	37	13	22	7.3
20	32	21	25	30	628	48	122	345	35	12	78	7.2
21	30	21	23	30	446	45	2570	285	29	11	103	6.4
22	28	20	24	27	236	41	1020	230	26	12	50	6.2
23	234	20	23	20	e148	38	426	200	24	10	48	5.5
24	555	21	e20	22	e110	37	287	299	22	9.9	31	5.0
25	192	22	e17	24	e98	42	382	1520	20	10	24	4.8
26	108	24	e15	17	e83	43	291	1260	18	11	18	4.9
27	75	23	e16	18	e79	42	3480	516	17	10	14	5.1
28	55	21	e15	19	e52	46	5490	438	e17	10	12	4.9
29	44	22	e16	21	---	50	1610	487	e22	14	11	4.4
30	37	22	e16	e18	---	94	692	268	e23	13	9.9	4.2
31	36	---	e14	e17	---	250	---	187	---	11	9.7	---
MEAN	64.9	23.7	22.8	21.1	117	87.3	665	1985	58.8	18.5	25.5	6.17
MAX	555	34	45	32	628	300	5490	17100	145	65	103	9.7
MIN	12	20	14	11	16	37	43	185	17	9.9	9.1	4.2
IN.	0.14	0.05	0.05	0.04	0.22	0.18	1.35	4.16	0.12	0.04	0.05	0.01

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	163	198	140	189	328	481	591	502	705	277	130	160
MAX	1174	2272	803	1027	1557	1898	2103	2647	5820	2903	1812	2079
(WY)	1930	1932	1943	1946	2001	1961	1944	1935	1947	1958	1932	1970
MIN	0.92	2.38	2.70	1.29	3.61	6.47	5.92	23.2	4.72	0.40	0.67	1.97
(WY)	1957	1957	1938	1940	1957	1957	1956	1938	1934	1934	1936	1955

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	565		260		317	
HIGHEST ANNUAL MEAN					796	
LOWEST ANNUAL MEAN					21.4	
HIGHEST DAILY MEAN	13100	Jun 6	17100	May 12	27300	Jun 6 1947
LOWEST DAILY MEAN	6.0	Jan 3	4.2	Sep 30	0.00	Jul 17-Aug 11 1934
ANNUAL SEVEN-DAY MINIMUM	7.4	Jan 1	4.8	Sep 24	0.00	Jul 17 1934
MAXIMUM PEAK FLOW	---		19200	May 12	38000	Jun 6 1947
MAXIMUM PEAK STAGE	---		24.48	May 12	26.93	Jun 6 1947
INSTANTANEOUS LOW FLOW	---		3.8	Sep 30	0.00	Jul 17-Aug 11 1934
ANNUAL RUNOFF (INCHES)	13.95		6.42		7.83	
10 PERCENT EXCEEDS	1270		306		594	
50 PERCENT EXCEEDS	80		26		43	
90 PERCENT EXCEEDS	17		9.9		4.2	

e Estimated



06902000 GRAND RIVER NEAR SUMNER, MO

LOCATION.--Lat 39°38'25", long 93°16'25", in NE ¼ sec.29, T.56 N., R.21 W., Livingston County, Hydrologic Unit 10280103, near right bank on downstream side of pier of bridge on State Highway 139, 240 ft downstream from Chicago, Burlington and Quincy Railroad Bridge, 2.0 mi southwest of Sumner, 2.5 mi downstream from Locust Creek, and at mile 41.0.

DRAINAGE AREA.--6,880 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1923 to current year. Prior to April 1924 monthly discharge only, published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 631.18 ft above National Geodetic Vertical Datum of 1929. Prior to July 11, 1926, nonrecording gage at site 200 ft upstream at same datum; July 11, 1926, to July 9, 1939, nonrecording gage at same site and datum; July 10, 1939, to Aug. 8, 1952, water-stage recorder at site 200 ft upstream at same datum; Aug. 9, 1952, to Nov. 12, 1953, nonrecording gage at site 120 ft upstream and at same datum; Nov. 13, 1953, to July 6, 1964, water-stage recorder and nonrecording gage, for stages below 8.3 ft, at site 120 ft upstream and at same datum; July 7, 1964, to May 26, 1965, nonrecording gage at present site and datum. Auxiliary water-stage recorder at site 3.2 mi downstream from base gage at datum 631.30 ft above National Geodetic Vertical Datum of 1929; Mar. 15, 1939, to Aug. 4, 1942, auxiliary nonrecording gage at various sites; Aug. 5, 1942, to Dec. 14, 1956, auxiliary nonrecording gage at present site.

REMARKS.--Water-discharge records fair. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 9, 1909, reached a stage of 36.7 ft, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	443	475	330	211	262	606	1630	4700	2960	445	361	161
2	419	455	328	200	320	615	1190	3450	2470	418	287	165
3	396	504	323	189	344	510	964	2780	2210	405	244	168
4	374	461	323	186	367	446	813	2200	1560	384	224	145
5	418	434	318	184	347	532	698	1810	1230	364	213	139
6	585	418	315	183	327	600	622	8220	1100	365	193	143
7	569	403	314	183	354	712	575	39600	1100	377	334	134
8	545	387	305	182	380	798	558	22100	981	346	278	131
9	510	378	310	189	576	894	820	13300	915	375	237	123
10	480	363	308	197	1520	1370	4340	10800	841	402	222	122
11	499	357	307	205	2150	1700	3530	22500	856	420	205	110
12	562	352	314	217	1470	1450	2160	64000	7470	508	191	113
13	478	350	345	232	1180	1170	5880	69300	9090	470	175	107
14	464	346	400	237	1000	1020	4750	53700	4900	498	174	111
15	e1340	345	487	246	901	890	2520	28900	2770	490	191	115
16	e3500	329	539	240	832	803	1790	13500	1850	408	259	133
17	3200	319	496	245	781	728	1430	7260	1350	516	1800	116
18	1590	313	443	228	737	666	1230	6140	1140	561	1130	116
19	929	311	396	229	786	623	1060	5420	947	442	570	118
20	687	302	369	238	2540	594	1820	4630	801	380	365	116
21	565	295	351	243	3210	563	5270	3930	705	327	433	120
22	490	306	345	252	2190	533	12500	3400	769	335	694	123
23	476	303	337	252	1450	510	6660	e3000	652	285	804	122
24	1200	327	302	261	1160	504	3660	4200	626	276	619	117
25	2450	321	226	253	982	502	2480	5660	592	291	545	115
26	1680	327	240	243	845	521	2670	10400	520	294	417	95
27	1160	325	237	252	640	521	3210	9090	511	292	303	102
28	861	324	240	255	597	525	22100	6560	450	288	255	104
29	698	336	248	257	---	546	17700	5820	441	614	211	91
30	592	337	206	280	---	594	9550	5300	458	660	194	90
31	527	---	218	274	---	1530	---	4610	---	501	179	---
MEAN	925	360	330	227	1009	760	4139	14400	1742	411	397	122
MAX	3500	504	539	280	3210	1700	22100	69300	9090	660	1800	168
MIN	374	295	206	182	262	446	558	1810	441	276	174	90
IN.	0.16	0.06	0.06	0.04	0.15	0.13	0.67	2.41	0.28	0.07	0.07	0.02

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1925 - 2002, BY WATER YEAR (WY)

	MEAN	2699	2914	2024	1932	3807	6040	7101	6609	7452	4640	1707	3036
MAX	20630	29030	15440	14750	19250	34220	26680	43450	67270	87900	9194	28090	
(WY)	1974	1932	1983	1932	1962	1979	1973	1995	1947	1993	1987	1926	
MIN	37.1	40.3	53.0	32.1	57.0	79.5	67.3	130	176	52.8	41.0	62.5	
(WY)	1957	1957	1956	1940	1939	1957	1956	1956	1988	1934	1936	1955	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1925 - 2002
ANNUAL MEAN	6395	2082	4156
HIGHEST ANNUAL MEAN			17390
LOWEST ANNUAL MEAN			367
HIGHEST DAILY MEAN	69100	Jun 7	166000
LOWEST DAILY MEAN	198	Jan 1	90
ANNUAL SEVEN-DAY MINIMUM	209	Jan 1	102
MAXIMUM PEAK FLOW	---		72600
MAXIMUM PEAK STAGE	---		39.57
INSTANTANEOUS LOW FLOW	---		90
ANNUAL RUNOFF (INCHES)	12.62		4.11
10 PERCENT EXCEEDS	16600		4040
50 PERCENT EXCEEDS	1800		475
90 PERCENT EXCEEDS	320		184

e Estimated

## GRAND RIVER BASIN

06902000 GRAND RIVER NEAR SUMNER, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1962 to June 1963, August 1967 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: January 1974 to September 1981.

WATER TEMPERATURE: January 1974 to September 1981.

REMARKS.--National Stream-Quality Accounting Network station October 1967 to September 1993. Ambient Water-Quality Monitoring Network station October 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 17...	1115	ENVIRONMENTAL	3210	8.6	75	7.5	263	8.9	--	--	--	--
NOV 06...	0915	ENVIRONMENTAL	416	9.3	90	7.3	421	13.0	190	58.3	10.5	4.10
DEC 04...	0910	ENVIRONMENTAL	323	9.7	87	7.8	494	9.5	--	--	--	--
JAN 08...	0910	BLANK	--	--	--	--	--	--	--	.06	E.007	<.10
JAN 08...	0955	ENVIRONMENTAL	179	14.6	104	7.4	L591	.5	280	84.2	15.9	3.21
FEB 05...	0940	ENVIRONMENTAL	347	13.6	95	7.8	267	.5	--	--	--	--
MAR 06...	0959	BLANK	--	--	--	--	--	--	--	--	--	--
MAR 06...	1000	ENVIRONMENTAL	573	13.7	103	7.9	495	2.4	--	--	--	--
APR 10...	0820	ENVIRONMENTAL	4220	8.1	76	7.7	371	11.9	--	--	--	--
MAY 07...	0950	ENVIRONMENTAL	43700	5.2	56	7.2	171	17.6	71	22.3	3.63	.76
JUN 10...	1400	ENVIRONMENTAL	841	7.2	91	7.9	472	25.1	--	--	--	--
JUN 10...	1401	REPLICATE	--	--	--	--	--	--	--	--	--	--
JUL 16...	0850	ENVIRONMENTAL	393	6.0	77	7.7	443	26.8	200	61.1	12.5	4.14
AUG 13...	1335	ENVIRONMENTAL	175	6.3	79	7.7	465	25.6	--	--	--	--
SEP 04...	1320	ENVIRONMENTAL	145	7.1	91	7.8	399	27.4	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 17...	--	106	107	130	0	--	--	--	555	--	E.02	2.0	.44
NOV 06...	12.1	170	174	212	0	12.1	.2	30.0	18	262	<.04	.57	<.05
DEC 04...	--	207	206	252	0	--	--	--	16	--	<.04	.40	.06
JAN 08...	.30	--	--	--	--	<.30	<.1	E.1	<10	<10	<.04	<.10	<.05
JAN 08...	19.2	234	235	287	0	14.8	.2	49.7	<10	360	.09	.40	.21
FEB 05...	--	168	168	205	0	--	--	--	12	--	<.04	.46	.49
MAR 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	--	178	179	218	0	--	--	--	12	--	.10	.51	.48
APR 10...	--	124	125	152	0	--	--	--	1440	--	<.04	3.2	.63
MAY 07...	4.91	73	71	87	0	3.16	.1	10.2	2420	401	.23	7.5	1.56
JUN 10...	--	181	181	221	0	--	--	--	--	--	<.04	.93	<.05
JUN 10...	--	--	--	--	--	--	--	--	--	--	<.04	.74	<.05
JUL 16...	13.9	178	178	217	0	11.3	.2	31.9	145	265	E.03	1.1	.77
AUG 13...	--	185	185	225	0	--	--	--	<10	--	<.04	.87	<.05
SEP 04...	--	181	183	223	0	--	--	--	65	--	<.04	.82	<.05

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

06902000 GRAND RIVER NEAR SUMNER, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	BEN- FLUR- ALIN WAT FLT 0.7 μ GF, REC (μg/L) (82673)	BUTYL- ATE, WATER, FLTRD DISS, REC (μg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 μ GF, REC (μg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 μ GF, REC (μg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (μg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (μg/L) (04041)	DCPA WATER FLTRD 0.7 μ GF, REC (μg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (μg/L) (04040)	DI- AZINON, DIS- SOLVED (μg/L) (39572)	DI- ELDRIN DIS- SOLVED (μg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 μ GF, REC (μg/L) (82677)	EPTC WATER FLTRD 0.7 μ GF, REC (μg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 μ GF, REC (μg/L) (82663)
	OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--
	NOV 06...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.039	<.005	<.005	<.02	<.002
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
MAR 06...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.011	<.005	<.005	<.02	<.002	<.009
APR 10...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.023	<.005	<.005	<.02	<.002	<.009
MAY 07...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.572	<.005	<.005	<.02	<.002	<.009
JUN 10...	<.010	<.002	E.003	<.020	<.005	<.018	<.003	E.103	<.005	<.005	<.02	<.002	<.009
JUN 10...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.142	<.005	<.005	<.02	<.002	<.009
JUL 16...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.088	<.005	<.005	<.02	<.002	<.009
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	ETHO- PROP WATER FLTRD 0.7 μ GF, REC (μg/L) (82672)	FONOFOS WATER DISS REC (μg/L) (04095)	LINDANE DIS- SOLVED (μg/L) (39341)	LIN- URON WATER FLTRD 0.7 μ GF, REC (μg/L) (82666)	MALA- THION, DIS- SOLVED (μg/L) (39532)	METHYL PARA- PHOS WAT FLT 0.7 μ GF, REC (μg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 μ GF, REC (μg/L) (82667)	METO- LACHLOR WATER DISSOLV (μg/L) (39415)	METRI- BUZIN WATER DISSOLV (μg/L) (82630)	MOL- INATE WATER FLTRD 0.7 μ GF, REC (μg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 μ GF, REC (μg/L) (82684)	P, P' DDE DISSOLV (μg/L) (34653)	PARA- THION, DIS- SOLVED (μg/L) (39542)
	OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--
	NOV 06...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.047	<.006	<.002	<.007	<.003
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
MAR 06...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.019	<.006	<.002	<.007	<.003	<.010
APR 10...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.071	<.006	<.002	<.007	<.003	<.007
MAY 07...	<.005	<.003	<.004	<.035	<.027	<.050	.010	1.61	.009	<.002	<.007	<.003	<.010
JUN 10...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.410	<.006	<.002	<.007	<.003	<.010
JUN 10...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.416	<.006	<.002	<.007	<.003	<.010
JUL 16...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.103	<.006	<.002	<.007	<.003	<.010
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--

06902000 GRAND RIVER NEAR SUMNER, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 06...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
06...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.009	<.02	<.034	<.02
APR 10...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	E.008	<.01	<.034	<.02
MAY 07...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.621	<.02	<.034	<.02
JUN 10...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.074	<.02	<.034	<.02
10...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.068	<.02	<.034	<.02
JUL 16...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.045	<.02	<.034	<.02
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 17...	--	--	--
NOV 06...	<.005	<.002	<.009
DEC 04...	--	--	--
JAN 08...	--	--	--
08...	--	--	--
FEB 05...	--	--	--
MAR 06...	<.005	<.002	<.009
06...	<.005	<.002	<.009
APR 10...	<.005	<.002	<.009
MAY 07...	<.005	<.002	<.009
JUN 10...	<.005	<.002	<.009
10...	<.005	<.002	<.009
JUL 16...	<.005	<.002	<.009
AUG 13...	--	--	--
SEP 04...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

L--Laboratory value.

## CHARITON RIVER BASIN

06904050 CHARITON RIVER AT LIVONIA, MO

LOCATION.--Lat 40°29'00", long 92°41'10", in NW ¼ SE ¼ NW ¼ sec.34, T.66 N., R.16 W., Schuyler County, Hydrologic Unit 10280201, on left bank 10 ft downstream from bridge on U.S. Highway 136, 1.0 mi upstream from Shoal Creek, 0.5 mi east of Livonia, and at mile 90.9.

DRAINAGE AREA.--864 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1974 to current year. Occasional discharge measurements were made from October 1962 to May 1974.

REVISED RECORDS.--WDR MO-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 770.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Considerable regulation by Rathbun Lake (Iowa station 06903880), 51.0 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e44	395	45	e30	e75	e45	192	279	1500	263	40	28
2	e43	376	44	e28	e60	e40	141	214	1470	622	e38	28
3	e43	346	43	e28	e45	e38	119	164	1450	1100	e37	28
4	e44	150	43	e30	e35	e37	96	129	1430	271	e36	28
5	48	66	43	e35	e40	e37	84	104	1420	82	e35	27
6	131	57	43	e35	e55	e60	77	574	1260	65	e35	26
7	99	54	70	e28	e60	89	78	366	1040	65	34	26
8	69	51	1080	e27	65	348	124	212	870	63	33	27
9	59	50	1110	e34	63	381	801	1280	692	72	34	33
10	55	48	1110	e48	67	287	685	536	689	74	33	33
11	52	47	1120	e60	82	185	351	2420	700	218	32	33
12	63	47	920	62	91	152	389	4820	730	229	32	31
13	62	46	660	58	84	124	413	3330	1560	143	34	30
14	54	46	654	56	79	106	276	2440	1450	226	33	31
15	58	45	648	55	80	91	200	951	888	243	33	32
16	58	47	645	52	85	81	158	560	765	237	36	31
17	58	45	635	e40	85	79	128	447	717	232	36	31
18	58	45	628	e35	82	89	110	692	697	230	34	e32
19	55	44	581	e40	108	85	93	1530	684	213	43	e33
20	52	43	344	e45	217	73	86	1540	774	92	77	e31
21	170	43	125	e45	297	68	117	1510	846	48	65	29
22	254	45	68	54	211	65	190	1500	842	45	59	29
23	340	47	64	49	148	60	188	1510	838	44	56	e28
24	509	48	e45	57	117	61	317	1620	833	42	51	e27
25	586	45	e40	54	95	64	389	2170	828	43	51	26
26	473	45	e38	59	81	65	178	1920	825	43	40	26
27	410	45	e38	62	69	69	1040	1310	824	42	35	26
28	390	45	e42	58	e55	76	2290	2300	658	43	32	27
29	382	46	e45	58	---	124	1200	2240	299	45	32	27
30	379	45	e38	e55	292	451	1860	269	46	30	26	26
31	386	---	e38	e90	---	287	---	1590	---	48	28	---
MEAN	177	83.4	356	47.3	94.0	118	365	1359	928	169	39.5	29.0
MAX	586	395	1120	90	297	381	2290	4820	1560	1100	77	33
MIN	43	43	38	27	35	37	77	104	269	42	28	26
IN.	0.24	0.11	0.48	0.06	0.11	0.16	0.47	1.81	1.20	0.23	0.05	0.04

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

MEAN	430	454	589	341	540	850	857	936	877	1013	613	472
MAX	1764	1714	2005	1797	1956	2046	1898	2239	1839	3923	2045	2029
(WY)	1994	1994	1983	1993	1983	1993	1983	1995	1980	1993	1993	1993
MIN	27.2	26.2	19.9	13.6	23.0	47.6	31.1	33.1	33.6	23.6	32.3	29.0
(WY)	1977	1990	1977	1977	1989	2000	1989	2000	1988	1988	1988	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1974 - 2002

ANNUAL MEAN	796	315	677
HIGHEST ANNUAL MEAN			1838
LOWEST ANNUAL MEAN			69.3
HIGHEST DAILY MEAN	3990	Mar 16	8960
LOWEST DAILY MEAN	25	Jan 1	13
ANNUAL SEVEN-DAY MINIMUM	30	Jan 1	13
MAXIMUM PEAK FLOW	---	5390	9200
MAXIMUM PEAK STAGE	---	21.38	28.33
INSTANTANEOUS LOW FLOW	---	24 <sup>a</sup>	13
ANNUAL RUNOFF (INCHES)	12.51	4.95	10.65
10 PERCENT EXCEEDS	1720	932	1600
50 PERCENT EXCEEDS	538	67	392
90 PERCENT EXCEEDS	45	32	32

e Estimated

a Minimum recorded, may have been less during period of estimated discharge.

06904500 CHARITON RIVER AT NOVINGER, MO

LOCATION.--Lat 40°14'05", long 92°41'14", on south line of SE ¼ NE ¼ sec.28, T.63 N., R.16 W., Adair County, Hydrologic Unit 10280202, on downstream side of center pier of bridge on State Highway 6, 0.6 mi east of Novinger, 1.0 mi downstream from Rye Creek, 2.0 mi upstream from Spring Creek, and at mile 73.1.

DRAINAGE AREA.--1,370 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1930 to September 1952, October 1954 to current year. Prior to February 1931 monthly discharge only, published in WSP 1310.

REVISED RECORDS.--WSP 896: 1939. WSP 1116: 1932(M).

GAGE.--Water-stage recorder. Datum of gage is 737.65 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 20, 1939, nonrecording gage at bridge over old channel, 500 ft east, at the same datum; Dec. 20, 1939, to Sept. 30, 1952, and Oct. 1, 1954, to Aug. 1, 1956, water-stage recorder, supplemented by nonrecording gage, at same site and datum; Aug. 3, 1956, to May 16, 1957, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. Some regulation by Rathbun Lake (Iowa station 06903880). U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage known, 28.6 ft, discharge, 27,000 ft<sup>3</sup>/s, June 1917.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	446	55	e45	e95	e80	314	811	2010	308	64	30
2	49	432	55	e40	e75	e60	242	617	1910	327	51	30
3	49	422	51	e37	e65	e50	197	485	1840	1270	46	29
4	50	303	50	e40	e55	e70	163	399	1790	553	46	28
5	75	116	50	e50	e50	e90	138	337	1740	197	44	28
6	74	76	50	e55	e55	e150	123	6570	1630	178	42	27
7	139	69	49	e50	e60	194	121	2860	1260	225	41	26
8	94	68	891	e50	e70	991	150	1090	1130	132	39	26
9	76	66	1260	e70	96	1450	1750	5150	844	119	38	27
10	68	62	1240	e70	214	680	1380	1950	826	120	38	34
11	65	58	1240	e75	197	396	637	11000	848	953	36	34
12	61	54	1180	87	230	310	709	22900	864	1010	35	34
13	74	53	807	83	205	263	903	12700	2670	328	45	33
14	66	51	725	80	188	229	529	6250	2590	258	42	34
15	84	50	690	76	214	199	361	2730	1260	306	36	35
16	123	52	675	74	201	169	270	1480	983	286	42	36
17	78	50	654	e50	179	148	211	1090	864	276	44	35
18	72	49	626	e45	166	149	170	917	803	264	43	34
19	68	50	605	e50	330	150	144	2010	768	258	49	36
20	66	50	416	e50	771	133	120	2100	783	199	90	43
21	66	49	216	e55	579	117	1960	1990	891	106	157	36
22	642	49	112	e60	380	103	564	1910	875	77	104	35
23	1450	51	91	73	282	103	393	1870	865	73	138	34
24	870	53	e60	64	231	99	397	2170	858	68	138	31
25	807	53	e55	61	191	104	994	5950	847	63	94	28
26	672	55	e50	70	150	111	394	4110	836	64	69	29
27	527	57	e45	85	e120	117	5230	1940	827	61	49	29
28	470	55	e50	81	e110	127	7030	4340	779	60	40	31
29	445	55	e55	78	---	174	2950	4090	435	66	37	32
30	434	57	e47	55	---	536	1290	2880	325	66	35	30
31	424	---	e47	e65	---	446	---	2270	---	67	32	---
MEAN	267	104	394	62.1	198	258	994	3773	1165	269	58.2	31.8
MAX	1450	446	1260	87	771	1450	7030	22900	2670	1270	157	43
MIN	49	49	45	37	50	50	120	337	325	60	32	26
IN.	0.23	0.08	0.33	0.05	0.15	0.22	0.81	3.18	0.95	0.23	0.05	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1970 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	758	716	864	561	978	1554	1612	1875	1367	1485	767	728
MAX	3352	2403	3318	2686	2652	4105	5302	5447	4482	9877	2770	3232
(WY)	1974	1993	1983	1993	2001	1993	1973	1995	2001	1993	1993	1993
MIN	25.6	30.2	20.0	13.6	28.0	73.8	35.8	43.0	46.1	32.2	28.1	31.8
(WY)	1972	1990	1977	1977	1989	2000	1989	2000	1988	1970	1971	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1970 - 2002 <sup>a</sup>
ANNUAL MEAN	1495	635	1106
HIGHEST ANNUAL MEAN			3299
LOWEST ANNUAL MEAN			107
HIGHEST DAILY MEAN	15600	Feb 9	22900
LOWEST DAILY MEAN	42	Jan 1	11
ANNUAL SEVEN-DAY MINIMUM	47	Jan 1	12
MAXIMUM PEAK FLOW	---	24200	May 12
MAXIMUM PEAK STAGE	---	24.68	May 12
INSTANTANEOUS LOW FLOW	---	24	Jan 30
ANNUAL RUNOFF (INCHES)	14.82	6.30	10.97
10 PERCENT EXCEEDS	3400	1460	2350
50 PERCENT EXCEEDS	807	117	533
90 PERCENT EXCEEDS	51	38	41

e Estimated

<sup>a</sup> Post-regulation period.

## CHARITON RIVER BASIN

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO

LOCATION.--Lat 39°32'25", long 92°47'23", in NW ¼ SW ¼ sec.26, T.55 N., R.17 W., Chariton County, Hydrologic Unit 10280202, on right bank on downstream side of road at bridge on State Highway 129, 3.2 mi northwest of Prairie Hill, 13.5 mi upstream from Puzzle Creek, and at mile 19.6.

DRAINAGE AREA.--1,870 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1928 to current year. Prior to Oct. 1, 1953, published as Chariton River near Keytesville (06905600). Prior to May 1929, monthly discharge only, published in WSP 1309.

GAGE.--Water-stage recorder. Datum of gage is 632.05 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to Oct. 1, 1953, nonrecording gage at site 8.2 mi downstream at datum 13.68 ft lower; Oct. 1, 1953, to July 2, 1958, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. Some regulation by Rathbun Lake (Iowa station 06903880), 122 mi upstream, since 1970. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	86	497	55	e60	600	e120	667	1560	2420	458	137	78
2	80	504	57	e55	311	e100	511	1060	2180	406	123	69
3	75	544	52	e55	233	e80	382	792	2060	383	122	63
4	72	549	50	e65	209	e90	300	606	1990	1250	107	60
5	490	492	48	e70	175	e120	247	475	1940	1050	90	58
6	292	332	47	e65	108	165	207	4800	1890	545	84	55
7	189	218	43	e60	142	226	183	11400	1790	352	81	54
8	147	176	44	e90	131	309	193	4210	1440	412	75	51
9	179	151	437	e115	136	1010	224	10300	1360	359	68	48
10	168	125	1220	130	181	1910	1680	6420	1100	289	67	45
11	155	122	1230	113	365	1050	1590	12500	1130	294	64	44
12	119	100	1250	99	367	733	939	32200	2420	753	62	49
13	108	89	1230	89	364	571	853	35600	1580	1500	71	56
14	100	86	977	101	339	475	1170	18600	3140	701	88	56
15	148	70	856	91	307	400	801	9090	2640	479	81	62
16	382	65	819	93	330	340	597	3910	1560	458	93	60
17	380	63	802	72	328	293	470	2270	1190	466	108	65
18	239	61	785	52	277	259	383	1720	996	449	96	73
19	135	63	772	83	255	239	365	1400	895	440	118	77
20	97	61	761	88	973	238	581	2290	872	427	108	69
21	79	58	632	75	1500	227	1640	2400	888	410	110	66
22	66	52	438	67	943	198	3580	2290	998	320	189	72
23	355	53	280	71	645	175	1200	2280	1010	227	405	66
24	1510	64	165	79	473	164	741	3060	998	183	286	55
25	1040	71	e120	85	366	164	900	9450	992	164	278	49
26	908	78	e90	58	288	165	1330	8050	992	211	251	48
27	794	80	e85	67	e200	171	2560	4120	992	161	182	45
28	632	64	e75	74	e130	178	9290	2490	970	139	140	42
29	559	62	e80	95	---	188	5300	5160	959	299	111	41
30	520	58	e90	172	---	198	2880	3790	712	229	93	39
31	501	---	e85	774	---	521	---	2940	---	152	82	---
MEAN	342	167	441	105	381	357	1392	6685	1470	450	128	57.2
MAX	1510	549	1250	774	1500	1910	9290	35600	3140	1500	405	78
MIN	66	52	43	52	108	80	183	475	712	139	62	39
IN.	0.21	0.10	0.27	0.06	0.21	0.22	0.83	4.12	0.88	0.28	0.08	0.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	MEAN	736	814	747	723	1137	1896	2076	2122	2034	1432	717	714
MAX	5695	6574	5449	4516	4102	5724	8981	9560	14830	15980	4856	5203	
(WY)	1974	1962	1983	1946	1937	1973	1973	1995	1947	1993	1932	1993	
MIN	9.59	9.77	13.0	12.9	18.1	37.3	45.9	69.8	25.8	13.4	7.97	13.6	
(WY)	1957	1957	1957	1957	1957	1957	1956	2000	1934	1934	1936	1953	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1929 - 2002
ANNUAL MEAN	1747	1006	1260
HIGHEST ANNUAL MEAN			4320
LOWEST ANNUAL MEAN			159
HIGHEST DAILY MEAN	22300	Jun 6	35600
LOWEST DAILY MEAN	43	Dec 7	39
ANNUAL SEVEN-DAY MINIMUM	49	Dec 2	46
MAXIMUM PEAK FLOW	---		37100
MAXIMUM PEAK STAGE	---		23.01
INSTANTANEOUS LOW FLOW	---		22 <sup>a</sup>
ANNUAL RUNOFF (INCHES)	12.68		7.30
10 PERCENT EXCEEDS	4050		1960
50 PERCENT EXCEEDS	1010		233
90 PERCENT EXCEEDS	75		60

e Estimated

a Minimum recorded, may have been less during period of estimated record.



## CHARITON RIVER BASIN

163

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1962 to June 1963, August 1967 to July 1975, January 1978 to September 1986, November 1992 to current year.

REMARKS.--National Stream-Quality Accounting Network station January 1978 to September 1986 and an Ambient Water-Quality Monitoring Network station November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 05...	1345	ENVIRONMENTAL	481	10.2	102	7.6	281	14.7	130	39.3	8.45	4.65		
05...	1346	REPLICATE	--	--	--	--	--	--	130	39.4	8.48	4.71		
JAN 07...	1525	ENVIRONMENTAL	e60	13.3	94	7.5	380	.6	--	--	--	--		
MAR 05...	1420	ENVIRONMENTAL	e120	13.6	108	8.0	521	4.9	--	--	--	--		
MAY 06...	1610	ENVIRONMENTAL	5920	7.5	83	7.4	207	18.6	90	27.2	5.27	2.30		
06...	1615	BLANK	--	--	--	--	--	--	--	.08	.010	<.10		
JUL 15...	1350	ENVIRONMENTAL	965	8.8	116	8.1	273	28.7	--	--	--	--		
SEP 04...	1050	ENVIRONMENTAL	61	7.7	94	8.0	422	24.1	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 05...	7.25	102	103	126	0	13.8	.2	30.5	64	190	E.02	.56	.26	
05...	7.12	--	--	--	--	8.61	.2	30.1	58	188	<.04	.61	.32	
JAN 07...	--	176	176	215	0	--	--	--	<10	--	.19	.56	.48	
MAR 05...	--	167	168	205	0	--	--	--	38	--	.07	.49	.65	
MAY 06...	4.01	65	63	77	0	4.29	.2	27.1	241	167	.12	4.1	2.16	
06...	.47	--	--	--	--	<.30	<.1	E.1	<10	<10	<.04	<.10	<.05	
JUL 15...	--	93	92	113	0	--	--	--	E196	--	<.04	1.0	1.16	
SEP 04...	--	163	162	198	0	--	--	--	38	--	<.04	.69	<.05	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 05...	.039	E.05	<.02	.15	K34	60	K27	70	721	.9	E.02	<.1	<.1	<6
05...	.025	E.05	E.02	.15	--	--	--	68	743	1.0	<.04	<.1	<.1	<6
JAN 07...	<.008	<.06	<.02	<.06	<1	K1	K8	--	--	--	--	--	--	--
MAR 05...	E.005	<.06	E.01	.06	K2	K3	K19	--	--	--	--	--	--	--
MAY 06...	.044	.13	.11	1.54	6800	K15200	K20400	406	13700	1.2	.05	.8	<6	
06...	<.008	<.06	<.02	<.06	--	--	--	<1	2	<.2	<.04	<.1	<.1	<6
JUL 15...	.028	E.06	.04	.23	180	520	100	--	--	--	--	--	--	--
SEP 04...	<.008	<.06	.02	.14	72	140	84	--	--	--	--	--	--	--

## CHARITON RIVER BASIN

06905500 CHARITON RIVER NEAR PRAIRIE HILL, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
05...	109	.12	2	23.6	<.01	<.3	10	9
05...	114	.09	1	23.5	<.01	<.3	4	7
JAN								
07...	--	--	--	--	--	--	--	--
MAR								
05...	--	--	--	--	--	--	--	--
MAY								
06...	409	1.06	32	70.9	.07	.5	32	91
06...	<10	<.08	<1	<2.0	<.01	<.3	<1	1
JUL								
15...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

06905725 MUSSEL FORK NEAR MYSTIC, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 40°09'38", long 92°53'25", in NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  SW  $\frac{1}{4}$  sec.23, T.62 N., R.18 W., Sullivan County, Hydrologic Unit 10280202, access is approximately 2 mi east of Mystic on the left bank on upstream side of bridge on County Highway H.

DRAINAGE AREA.--24.0 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)	
OCT 24...	1450	ENVIRONMENTAL	3.5	7.3	76	7.5	216	15.0	--	--	--	--	
NOV 29...	0835	ENVIRONMENTAL	.17	10.4	81	8.0	411	3.5	170	49.7	11.9	7.62	
DEC 13...	0950	ENVIRONMENTAL	.83	10.0	80	7.9	408	4.5	--	--	--	--	
JAN 09...	1335	ENVIRONMENTAL	.20	12.5	90	7.8	618	.5	260	75.2	17.8	8.59	
FEB 28...	0855	ENVIRONMENTAL	1.4	14.8	106	8.2	404	.5	--	--	--	--	
MAR 20...	1405	ENVIRONMENTAL	.97	14.5	137	8.6	395	11.5	--	--	--	--	
APR 18...	0900	ENVIRONMENTAL	1.6	6.9	80	7.9	416	20.5	--	--	--	--	
MAY 22...	0915	ENVIRONMENTAL	2.2	9.3	92	7.9	351	13.5	150	43.2	9.33	3.57	
JUN 27...	1515	ENVIRONMENTAL	.06	10.2	140	7.9	367	30.0	--	--	--	--	
JUN 27...	1516	REPLICATE	--	--	--	--	--	--	--	--	--	--	
AUG 22...	0855	ENVIRONMENTAL	.17	5.0	61	7.9	302	24.0	--	--	--	--	
DATE		ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 24...	--	68	66	81	0	--	--	--	50	--	E.02	1.6	.80
NOV 29...	18.1	166	167	204	0	20.5	.2	28.0	<10	258	E.04	.92	<.05
DEC 13...	--	159	157	191	0	--	--	--	20	--	E.02	.63	<.05
JAN 09...	30.4	220	221	270	0	33.2	.2	55.5	10	386	.07	.92	.05
FEB 28...	--	132	134	163	0	--	--	--	18	--	<.04	.83	.55
MAR 20...	--	135	135	159	3	--	--	--	<10	--	<.04	.60	<.05
APR 18...	--	146	148	181	0	--	--	--	17	--	<.04	.77	<.05
MAY 22...	14.0	128	128	156	0	10.7	.2	35.4	20	231	<.04	.93	<.05
JUN 27...	--	146	147	179	0	--	--	--	10	--	<.04	.65	E.04
JUN 27...	--	--	--	--	--	--	--	--	12	--	<.04	.73	E.04
AUG 22...	--	138	139	168	0	--	--	--	22	--	<.04	.74	E.03

## CHARITON RIVER BASIN

06905725 MUSSEL FORK NEAR MYSTIC, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 24...	.022	.17	.14	.42	5900	5300	8600	--	--	--	--	--	--
NOV 29...	<.008	<.06	<.02	E.06	K2800	K2100	110	3	164	1.0	<.04	<.1	<6
DEC 13...	<.008	<.06	<.02	E.05	1400	620	2600	--	--	--	--	--	--
JAN 09...	<.008	<.06	<.02	E.05	45	K24	250	5	115	1.1	E.02	<.1	<6
FEB 28...	.010	<.06	<.02	.09	K9	K10	K20	--	--	--	--	--	--
MAR 20...	<.008	<.06	<.02	E.04	K7	K1	K8	9	--	--	--	--	--
APR 18...	<.008	<.06	E.01	.07	K71	69	K59	--	--	--	--	--	--
MAY 22...	<.008	<.06	<.02	.12	630	370	510	2	245	1.0	<.04	<.1	<6
JUN 27...	E.005	<.06	<.02	E.04	110	92	K15	--	--	--	--	--	--
JUN 27...	E.005	<.06	<.02	E.04	--	--	--	--	--	--	--	--	--
AUG 22...	<.008	<.06	<.02	.08	240	330	870	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 24...	--	--	--	--	--	--	--	--
NOV 29...	37	<.08	M	755	<.01	.3	2	3
DEC 13...	--	--	--	--	--	--	--	--
JAN 09...	35	E.04	<1	1550	<.01	.6	4	1
FEB 28...	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--
APR 18...	--	--	--	--	--	--	--	--
MAY 22...	18	<.08	M	327	<.01	.6	1	4
JUN 27...	--	--	--	--	--	--	--	--
JUN 27...	--	--	--	--	--	--	--	--
AUG 22...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06906150 LONG BRANCH CREEK AT ATLANTA, MO

LOCATION.--Lat 39°53'51", long 92°29'34", in SE ¼ NW ¼ NW ¼ sec.20, T.59N., R.14W., Macon County, Hydrologic Unit 10280203, at right upstream end of bridge on Marion Street, 0.65 mi east of Highway RA, and 0.3 mi west of Atlanta.

DRAINAGE AREA.--23.0 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1995 to current year. Published as "near Atlanta" 1995 to 2000.

GAGE.--Water-stage recorder. Datum of gage is 814.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for period Nov. 25 to Dec. 13 and estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.17	0.10	0.78	0.03	6.9	0.77	1.2	12	1.4	0.02	0.26	0.13
2	0.09	0.09	0.84	0.00	e5.0	0.74	1.0	9.3	0.85	0.02	0.15	0.09
3	0.08	0.07	0.79	0.00	e6.0	0.77	0.80	6.6	0.59	0.02	0.19	0.08
4	0.17	0.10	0.68	0.00	e7.0	0.69	0.74	5.1	0.42	0.01	0.17	0.05
5	4.2	0.09	2.4	e0.25	e4.0	0.74	0.60	3.7	0.34	0.0	0.11	0.04
6	9.0	0.09	1.2	e0.15	e5.0	2.6	0.52	425	0.27	0.0	0.08	0.02
7	3.3	0.08	0.47	e0.10	4.0	6.9	0.55	339	0.22	0.02	0.07	0.02
8	1.3	0.11	0.60	0.04	1.5	7.1	1.9	53	0.18	0.02	0.05	0.0
9	0.58	0.10	0.46	0.06	33	240	11	555	0.16	0.0	0.03	0.00
10	0.47	0.12	0.63	0.15	172	58	8.0	69	0.13	0.03	0.38	0.00
11	0.38	0.16	0.24	0.13	83	12	3.2	786	0.16	2.9	1.1	0.00
12	0.36	0.18	0.29	0.12	21	7.1	1.9	2060	0.37	4.8	0.34	0.00
13	0.27	0.18	0.36	0.10	e9.5	5.4	1.3	613	3.8	2.4	0.26	0.00
14	0.20	0.19	0.63	0.10	e13	4.5	0.96	46	15	0.65	0.17	0.00
15	20	0.23	1.6	0.09	e6.0	3.6	0.80	24	2.1	0.29	0.15	0.00
16	147	0.24	1.6	0.10	e3.0	2.8	0.61	17	1.3	0.22	0.16	0.00
17	17	0.30	1.2	0.06	e2.0	2.4	0.51	12	0.59	0.12	0.15	0.00
18	2.4	0.31	0.72	0.04	e8.0	1.9	0.36	9.8	0.36	0.09	0.15	0.00
19	0.51	0.38	0.58	0.04	e48	1.9	25	7.7	0.20	0.08	0.42	0.00
20	0.16	0.27	0.48	0.04	e115	2.4	7.5	4.8	0.14	0.06	0.23	0.00
21	0.03	0.31	0.37	0.04	59	2.0	449	2.9	0.10	0.04	0.17	0.02
22	0.03	0.27	0.42	0.05	16	3.1	136	1.7	0.09	0.04	0.14	0.04
23	0.03	0.36	0.63	0.07	7.8	4.2	24	1.9	0.07	0.02	0.54	0.02
24	0.15	0.51	0.36	0.06	5.6	2.3	59	35	0.06	0.01	0.36	0.03
25	0.06	0.60	0.28	0.05	4.4	1.7	129	508	0.06	0.00	0.46	0.02
26	0.05	1.0	0.22	0.04	3.7	1.6	19	163	0.05	0.02	2.5	0.01
27	0.04	0.98	0.16	0.04	3.4	1.5	293	12	0.04	0.02	1.3	0.0
28	0.04	0.96	0.14	0.04	2.3	1.5	681	6.7	0.03	0.00	0.68	0.00
29	0.07	0.78	0.09	0.09	---	1.8	61	120	0.03	0.07	0.39	0.00
30	0.09	0.89	0.06	0.74	---	1.6	23	11	0.02	0.09	0.27	0.00
31	0.08	---	0.04	5.0	---	1.5	---	3.9	---	0.56	0.20	---
MEAN	6.72	0.34	0.62	0.25	23.4	12.4	64.8	191	0.97	0.41	0.38	0.02
MAX	147	1.0	2.4	5.0	172	240	681	2060	15	4.8	2.5	0.13
MIN	0.03	0.07	0.04	0.00	1.5	0.69	0.36	1.7	0.02	0.00	0.03	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	13.9	11.1	5.68	19.0	34.0	25.9	42.9	64.6
MAX	87.7	68.9	26.5	61.7	84.1	81.8	86.7	191
(WY)	1999	1999	1999	1999	1997	1998	1999	2002
MIN	0.25	0.34	0.04	0.10	1.69	3.02	0.63	0.54
(WY)	1997	2002	2001	2000	2000	2000	2000	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1995 - 2002

	2001	2002	1995-2002
ANNUAL MEAN	20.7	25.2	21.5
HIGHEST ANNUAL MEAN			37.0
LOWEST ANNUAL MEAN			1.88
HIGHEST DAILY MEAN	818	2060	2060
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.00	0.00
MAXIMUM PEAK FLOW	---	3360	3360
MAXIMUM PEAK STAGE	---	16.44	16.44
INSTANTANEOUS LOW FLOW	---	0.00	0.00
10 PERCENT EXCEEDS	30	18	26
50 PERCENT EXCEEDS	0.82	0.38	0.79
90 PERCENT EXCEEDS	0.04	0.02	0.03

e Estimated

## LITTLE CHARITON RIVER BASIN

06906190 LONG BRANCH RESERVOIR NEAR MACON, MO

LOCATION.--Lat 39°45'05", long 92°30'20", in NW ¼ sec.10, T.57 N., R.14 W., Macon County, Hydrologic Unit 10280203, in Administration Building at left end of dam on East Fork Little Chariton River, 2.0 mi west of junction of U.S. Highways 63 and 36 in Macon, and 2.0 mi below confluence with Long Branch.

DRAINAGE AREA.--109 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1978 to current year. Contents published 1982 to current year. Records collected at same site since 1978 are available from the U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by a rolled earthfill type dam. Closure began on Sept. 3, 1976. Storage began on Aug. 2, 1978. An uncontrolled limited service type spillway, 50 ft wide, is located at the right abutment. Capacity of surcharge pool 98,590 ac-ft (elevation 801.1 ft to 820.7 ft); of flood control pool 30,600 ac-ft (elevation 791.1 ft to 801.0 ft); and of multipurpose pool 34,640 ac-ft (elevation 751.1 ft to 791.0 ft). Lake is used for flood control, water supply, water-quality control and recreation. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 70,500 ac-ft, May 13, 2002, elevation, 802.58 ft; minimum, 14,300 ac-ft, Dec. 5, 1980, elevation, 780.21 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 70,500 ac-ft, May 13, elevation, 802.58 ft; minimum, 26,800 ac-ft, Sept. 30, elevation, 787.69 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	788.99	788.88	788.45	788.08	787.96	788.84	789.40	792.88	796.40	791.77	790.36	788.81
2	788.96	788.89	788.44	788.07	787.97	788.85	789.43	792.78	796.16	791.69	790.30	788.74
3	788.93	788.89	788.42	788.05	787.99	788.87	789.40	792.69	795.89	791.61	790.24	788.70
4	788.92	788.86	788.41	788.03	788.02	788.84	789.37	792.60	795.68	791.54	790.15	788.63
5	789.03	788.85	788.38	788.01	788.03	788.84	789.33	792.51	795.45	791.48	790.09	788.55
6	788.99	788.84	788.41	788.02	788.04	788.82	789.31	792.64	795.21	791.42	790.05	788.49
7	788.98	788.82	788.40	788.01	788.05	788.84	789.28	794.12	794.97	791.41	789.98	788.43
8	788.95	788.81	788.40	787.99	788.02	788.84	789.30	794.48	794.75	791.35	789.91	788.37
9	788.93	788.78	788.37	787.98	788.04	789.03	789.36	795.18	794.53	791.29	789.84	788.32
10	788.92	788.75	788.35	787.97	788.11	789.33	789.37	795.67	794.32	791.33	789.79	788.26
11	788.93	788.75	788.33	787.96	788.24	789.42	789.38	795.98	794.12	791.31	789.71	788.20
12	788.95	788.72	788.32	787.95	788.39	789.46	789.41	798.04	794.11	791.32	789.65	788.13
13	788.92	788.71	788.36	787.95	788.41	789.47	789.39	802.58	793.87	791.29	789.61	788.07
14	788.92	788.69	788.33	787.93	788.42	789.48	789.39	802.52	793.66	791.24	789.55	788.00
15	788.90	788.67	788.32	787.92	788.45	789.50	789.37	802.05	793.51	791.18	789.52	788.00
16	788.96	788.66	788.32	787.91	788.44	789.49	789.36	801.55	793.37	791.12	789.47	787.97
17	789.14	788.66	788.33	787.89	788.43	789.47	789.36	801.05	793.23	791.06	789.46	787.95
18	789.14	788.64	788.30	787.88	788.43	789.47	789.35	800.51	793.09	791.01	789.42	787.94
19	789.13	788.64	788.30	787.87	788.43	789.47	789.40	799.97	792.95	790.96	789.40	787.91
20	789.12	788.60	788.27	787.87	788.52	789.49	789.44	799.42	792.87	790.91	789.35	787.95
21	789.11	788.57	788.27	787.86	788.76	789.55	789.59	798.88	792.75	790.85	789.28	787.93
22	789.11	788.55	788.24	787.85	788.83	789.45	790.40	798.36	792.63	790.79	789.23	787.90
23	789.03	788.53	788.24	787.84	788.85	789.42	790.62	797.91	792.52	790.75	789.24	787.88
24	789.11	788.52	788.23	787.83	788.87	789.43	790.66	797.61	792.42	790.67	789.24	787.85
25	789.06	788.54	788.20	787.81	788.89	789.46	790.79	797.74	792.32	790.60	789.19	787.82
26	789.03	788.54	788.19	787.78	788.89	789.44	790.95	798.02	792.21	790.56	789.14	787.80
27	789.00	788.52	788.16	787.77	788.85	789.41	791.01	797.75	792.12	790.49	789.09	787.77
28	788.97	788.50	788.16	787.77	788.83	789.38	792.04	797.44	792.03	790.44	789.04	787.75
29	788.95	788.48	788.13	787.76	---	789.40	792.91	797.16	791.93	790.52	788.97	787.73
30	788.95	788.47	788.12	787.76	---	789.39	792.94	796.93	791.84	790.47	788.92	787.69
31	788.91	---	788.10	787.95	---	789.36	---	796.67	---	790.42	788.87	---
MEAN	789.00	788.68	788.30	787.91	788.40	789.27	789.98	797.22	793.70	791.06	789.55	788.12
MAX	789.14	788.89	788.45	788.08	788.89	789.55	792.94	802.58	796.40	791.77	790.36	788.81
MIN	788.90	788.47	788.10	787.76	787.96	788.82	789.28	792.51	791.84	790.42	788.87	787.69
(-)	29400	28400	27600	27300	29200	30400	39100	49900	36300	32800	29300	26800
(=)	-300	-1000	-800	-300	+1900	+1200	+8700	+10800	-13600	-3500	-3500	-2500

CAL YR 2001....+7900  
WTR YR 2002....-2900

(-) Contents, in acre-feet, at the end of the month.  
(=) Change in contents, in acre-feet.

06906200 EAST FORK LITTLE CHARITON RIVER NEAR MACON, MO

LOCATION.--Lat 39°44'59", long 92°31'03", in NW ¼ NW ¼ NW ¼ sec.18, T.57 N., R.14 W., Macon County, Hydrologic Unit 10280203, on right bank 250 ft downstream from Long Branch Lake and 3.0 mi west of Macon.

DRAINAGE AREA.--112 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1971 to current year. Partial-record station May 1970 to August 1971.

GAGE.--Water-stage recorder. Datum of gage is 741.43 ft above National Geodetic Vertical Datum of 1929. Sept. 8, 1971, to Aug. 1, 1985, water-stage recorder at site 400 ft downstream at same datum.

REMARKS.--Records fair. Complete regulation by Long Branch Reservoir (06906190), 250 ft upstream. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 8,700 ft<sup>3</sup>/s, Apr. 21, 1973; gage height, 20.60 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	12	9.1	9.2	9.5	8.8	9.9	177	353	58	45	43
2	14	12	9.0	9.2	9.4	8.9	9.9	168	336	58	45	43
3	14	12	8.9	9.4	9.4	8.8	9.9	156	326	57	45	44
4	14	11	8.8	9.6	9.4	8.7	9.9	145	320	58	45	43
5	14	11	8.9	9.5	9.5	8.9	10	135	312	56	44	43
6	14	11	9.0	9.7	9.5	9.2	9.9	211	304	54	43	43
7	14	11	9.1	9.5	9.6	9.5	10	298	295	54	43	43
8	14	11	9.2	9.7	9.7	9.4	10	313	287	53	44	43
9	14	11	8.4	9.8	9.6	9.7	10	383	278	52	44	43
10	14	11	8.3	9.3	9.4	9.6	10	334	269	53	44	43
11	14	10	8.4	9.3	9.5	9.5	10	452	263	51	44	43
12	14	10	8.2	9.0	9.4	9.6	10	1030	261	52	44	43
13	14	10	8.2	9.2	9.5	9.8	10	1270	256	51	44	43
14	14	10	8.1	9.4	9.5	9.7	10	1240	244	50	20	19
15	14	9.8	8.5	9.3	9.5	9.8	11	1220	233	49	28	6.8
16	14	9.8	8.5	9.2	9.3	9.7	11	1220	221	48	43	6.9
17	14	9.7	8.4	9.3	9.4	9.6	11	1200	203	48	43	7.0
18	14	9.4	8.2	9.5	9.5	9.7	11	1190	188	48	43	6.9
19	14	9.1	8.1	9.5	9.6	9.8	11	1180	174	48	43	6.9
20	14	9.3	8.4	9.3	9.0	9.7	11	1140	163	48	43	7.1
21	13	9.2	8.4	9.2	8.7	9.9	11	1030	151	47	43	6.7
22	13	9.3	8.4	9.5	8.7	9.9	11	807	139	48	43	7.0
23	13	8.6	8.5	9.8	8.7	9.9	11	649	127	47	43	7.0
24	13	8.7	8.7	9.8	8.8	9.8	11	558	116	46	43	7.3
25	13	8.4	8.9	9.8	8.7	9.8	12	696	105	46	43	7.3
26	13	8.2	9.0	9.7	8.9	9.7	12	696	93	46	43	7.1
27	12	8.5	9.0	9.7	8.8	9.8	19	612	82	46	43	7.2
28	12	8.7	9.1	9.7	8.9	9.7	72	504	73	47	43	7.4
29	12	8.9	9.1	9.6	---	9.8	145	456	64	46	43	7.1
30	12	8.9	9.1	9.7	---	9.9	161	416	60	45	43	5.3
31	11	---	9.1	9.6	---	10	---	380	---	45	43	---
MEAN	13.4	9.92	8.68	9.48	9.26	9.57	22.4	654	210	50.2	42.3	23.0
MAX	14	12	9.2	9.8	9.7	10	161	1270	353	58	45	44
MIN	11	8.2	8.1	9.0	8.7	8.7	9.9	135	60	45	20	5.3
IN.	0.14	0.10	0.09	0.10	0.09	0.10	0.22	6.73	2.09	0.52	0.44	0.23

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	57.0	64.6	77.6	47.2	57.6	112	130	195	133	122	68.0	50.6
MAX	406	354	304	223	200	502	475	680	369	743	401	341
(WY)	1987	1986	1993	1993	1999	1985	1983	1995	1995	1993	1981	1981
MIN	0.16	0.27	0.00	0.00	0.00	7.30	7.27	7.21	5.45	5.52	2.48	7.06
(WY)	1979	1979	1979	1979	1979	1989	1989	1988	1988	1989	1980	1984

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1979 - 2002 <sup>a</sup>
ANNUAL MEAN	61.9	89.4	93.1
HIGHEST ANNUAL MEAN			242
LOWEST ANNUAL MEAN			7.13
HIGHEST DAILY MEAN	324	1270	1380
LOWEST DAILY MEAN	8.1	5.3	0.00
ANNUAL SEVEN-DAY MINIMUM	8.3	6.9	0.00
MAXIMUM PEAK FLOW	---	1300	1560
MAXIMUM PEAK STAGE	---	15.00	15.00
INSTANTANEOUS LOW FLOW	---	0.09	0.00
ANNUAL RUNOFF (INCHES)	7.51	10.83	11.29
10 PERCENT EXCEEDS	174	262	284
50 PERCENT EXCEEDS	40	11	45
90 PERCENT EXCEEDS	9.1	8.7	6.8

<sup>a</sup> Post-regulation period.

## LITTLE CHARITON RIVER BASIN

06906300 EAST FORK LITTLE CHARITON RIVER NEAR HUNTSVILLE, MO

LOCATION.--Lat 39°27'18", long 92°34'07", in NW ¼ NW ¼ NW ¼ sec.26, T.54 N., R.15 W., Randolph County, Hydrologic Unit 10280203, on right bank downstream end of bridge on State Highway C, 1.0 mi downstream from Sugar Creek, and 1.5 mi northwest of Huntsville.

DRAINAGE AREA.--220 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1962 to current year. Occasional low-flow measurements, water years 1942-43, 1945-46.

GAGE.--Water-stage recorder. Datum of gage is 655.86 ft above National Geodetic Vertical Datum of 1929 (levels by the Missouri State Highway and Transportation Commission). Oct. 29, 1962 to July 18, 1972, on former bridge, at same datum; July 18, 1972 to Sept. 23, 1974, at datum 0.63 ft higher.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor. Some regulation by Long Branch Reservoir (station 06906190), 34 mi upstream since 1978. Low flow affected by operation of pumps 7 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 30,000 ft<sup>3</sup>/s, Apr. 21, 1973; gage height, 20.78 ft, former datum.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	16	12	e9.0	332	e20	19	236	479	80	60	51
2	14	17	11	e9.0	102	e18	18	226	444	78	60	51
3	14	18	11	e9.0	73	e16	19	190	420	80	58	51
4	13	18	12	e9.8	49	e15	17	165	406	78	57	51
5	259	18	12	e10	35	e20	17	148	393	74	57	51
6	73	17	13	e10	33	47	16	2170	378	71	54	51
7	25	17	12	e10	32	46	17	2960	360	68	52	51
8	18	17	12	e11	25	41	22	1610	344	67	52	51
9	16	16	11	12	25	310	44	5770	328	65	52	51
10	14	16	11	13	34	129	35	2340	317	74	53	50
11	20	16	12	13	32	65	26	2970	408	77	52	49
12	18	16	12	12	27	47	20	3560	581	97	52	49
13	17	16	19	12	22	42	19	2230	429	68	55	50
14	18	16	18	13	20	37	18	1490	348	63	54	50
15	20	17	14	13	19	34	18	1340	285	60	33	31
16	65	17	17	12	18	30	17	1280	254	58	33	12
17	29	16	21	10	18	28	15	1280	229	57	56	11
18	18	16	20	11	17	26	16	1250	206	56	64	11
19	16	17	18	13	21	26	15	1170	182	58	62	16
20	15	16	16	13	223	29	16	1130	166	57	58	19
21	14	15	15	16	120	27	784	1070	154	57	55	14
22	15	15	16	14	59	24	300	943	143	60	56	12
23	17	15	17	18	42	22	110	797	132	63	72	11
24	19	23	13	16	34	23	64	769	123	55	72	11
25	19	25	13	14	28	26	46	1920	116	55	57	11
26	18	20	e11	17	23	24	32	1160	107	162	55	11
27	17	18	e12	15	19	22	1250	862	99	60	54	11
28	17	17	e12	15	e18	21	1120	724	95	56	52	14
29	17	12	e11	15	---	21	332	634	90	120	52	14
30	17	12	e10	94	---	22	248	575	84	69	52	13
31	16	---	e9.5	773	---	19	---	522	---	61	51	---
MEAN	28.5	16.8	13.7	39.7	53.6	41.2	156	1403	270	71.1	54.9	31.0
MAX	259	25	21	773	332	310	1250	5770	581	162	72	51
MIN	13	12	9.5	9.0	17	15	15	148	84	55	33	11
IN.	0.15	0.09	0.07	0.21	0.25	0.22	0.79	7.35	1.37	0.37	0.29	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1979 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	104	130	140	98.1	173	228	252	363	228	227	105	106
MAX	1019	756	666	362	732	945	935	1403	562	1569	514	774
(WY)	1987	1986	1983	1993	1985	1985	1983	2002	1995	1993	1993	1993
MIN	6.44	2.66	4.95	6.48	7.59	10.6	10.2	12.1	2.56	5.34	3.64	2.70
(WY)	1981	1981	1989	1989	1989	1989	1989	1988	1988	1989	1980	1988

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

WATER YEARS 1979 - 2002<sup>a</sup>

ANNUAL MEAN	145	183	179
HIGHEST ANNUAL MEAN			468
LOWEST ANNUAL MEAN			17.3
HIGHEST DAILY MEAN	3000	Jun 6	7760
LOWEST DAILY MEAN	8.5	Jan 1	0.00
ANNUAL SEVEN-DAY MINIMUM	9.4	Jan 1	0.40
MAXIMUM PEAK FLOW	---		6260
MAXIMUM PEAK STAGE	---		17.39
INSTANTANEOUS LOW FLOW	---		7.0 <sup>c</sup>
ANNUAL RUNOFF (INCHES)	8.93		11.32
10 PERCENT EXCEEDS	292		407
50 PERCENT EXCEEDS	57		28
90 PERCENT EXCEEDS	14		12

e Estimated

<sup>a</sup> Post-regulation period.

<sup>b</sup> Occurred during period of estimated record.

<sup>c</sup> Minimum recorded, may have been less during period of estimated record.



## LITTLE CHARITON RIVER BASIN

171

06906300 EAST FORK LITTLE CHARITON RIVER NEAR HUNTSVILLE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	OXYGEN,	OXYGEN,	pH	SPE-CIFIC	TEMPER-	HARD-NESS	CALCIUM	MAGNE-SIUM,	POTAS-SIUM,		
			(cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	(per-cent satur-ation) (00301)	WATER WHOLE FIELD (stand-ard units) (00400)	CON-DUCT-ANCE (µS/cm) (00095)	ATURE WATER (deg C) (00010)	TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	DIS-SOLVED (mg/L as Ca) (00915)	DIS-SOLVED (mg/L as Mg) (00925)	DIS-SOLVED (mg/L as K) (00935)		
NOV 05...	1130	ENVIRONMENTAL	18	9.0	88	7.7	1070	13.2	490	116	48.4	5.70		
JAN 07...	1325	ENVIRONMENTAL	e10	13.7	96	7.5	615	.3	--	--	--	--		
MAR 05...	1215	ENVIRONMENTAL	e20	15.1	110	7.8	695	1.7	--	--	--	--		
MAY 06...	1330	ENVIRONMENTAL	3170	8.4	89	7.4	320	16.7	160	43.3	11.7	3.57		
JUL 15...	1145	ENVIRONMENTAL	61	7.3	89	7.8	383	24.5	--	--	--	--		
SEP 04...	0910	ENVIRONMENTAL	51	6.8	81	7.3	249	23.5	--	--	--	--		
DATE		ANC WATER UNFLTRD FET FIELD (mg/L as Na) (00930)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, DIS-SOLVED NO <sub>2</sub> +NO <sub>3</sub> (mg/L as N) (00631)	
NOV 05...	45.2	111	111	136	0	8.46	.3	447	14	784	<.04	.46	<.05	
JAN 07...	--	243	241	294	0	--	--	--	<10	--	.09	.57	.35	
MAR 05...	--	127	125	152	0	--	--	--	<10	--	.04	.41	.08	
MAY 06...	6.57	63	61	74	0	2.79	.2	85.6	1280	242	.09	2.7	.60	
JUL 15...	--	62	61	75	0	--	--	--	E98	--	<.04	.73	.40	
SEP 04...	--	54	55	67	0	--	--	--	39	--	<.04	.53	<.05	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 05...	<.008	<.06	<.02	.06	36	K75	47	33	280	.7	E.03	E.1	<6	
JAN 07...	E.005	<.06	<.02	<.06	K2	K13	27	--	--	--	--	--	--	
MAR 05...	<.008	<.06	<.02	<.06	<2	<2	K8	--	--	--	--	--	--	
MAY 06...	.039	.23	.15	1.12	2400	K10300	K18600	545	8140	1.1	.12	.8	E3	
JUL 15...	.013	E.04	.02	.14	230	460	200	--	--	--	--	--	--	
SEP 04...	<.008	<.06	<.02	.09	160	K332	380	--	--	--	--	--	--	

## LITTLE CHARITON RIVER BASIN

06906300 EAST FORK LITTLE CHARITON RIVER NEAR HUNTSVILLE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 05...	70	E.06	<1	693	<.01	E.2	--	6
JAN 07...	--	--	--	--	--	--	--	--
MAR 05...	--	--	--	--	--	--	--	--
MAY 06...	824	1.66	20	433	.05	.7	--	74
JUL 15...	--	--	--	--	--	--	--	--
SEP 04...	--	--	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

06906500 MISSOURI RIVER AT GLASGOW, MO

LOCATION.--Lat 39°13'20", long 92°51'00", in NE ¼ NE ¼ NE ¼ sec.3, T.51 N., R.17 W., Howard County, Hydrologic Unit 10300102, at bridge on State Highway 240 in Glasgow, 75 ft downstream from Chicago and Alton Railway bridge, 1 mi downstream from Little Chariton River, and at mile 226.8.

DRAINAGE AREA.--498,900 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

PERIOD OF RECORD.--October 2000 to current year. Gage-height records collected at site 1878-99 in reports of the Missouri River Commission. Gage-height records collected from January 1929 to August 1950 in files of the Corps of Engineers, Kansas City District. August 1950 to September 2000 gage-height records collected in files of the U.S.G.S.

GAGE.--Water-stage recorder. Datum of gage 586.49 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for discharges above 100,000 ft<sup>3</sup>/s, which are poor. Some regulation from many upstream reservoirs. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 29, 1993 reached a stage of 39.50 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53600	43500	43300	26800	39200	28800	39100	64600	63300	41800	35500	40000
2	52600	43100	41700	25700	37800	28900	39600	57800	62100	40700	33500	39100
3	54200	42300	41000	24500	33700	28600	38700	53700	59900	40100	32400	39100
4	53900	42100	39500	24100	30500	28200	38500	51300	58600	39500	31700	38600
5	53700	42500	37700	23400	28800	26700	38800	48500	56300	40300	31100	37500
6	58400	42600	35900	22700	27000	25500	39900	54300	54900	40100	31000	37000
7	53900	42800	34100	22600	25300	25600	40700	110000	55000	38800	30700	37000
8	48600	42800	32500	22900	24700	25400	40700	135000	52700	38200	30700	37000
9	46400	42800	32100	23300	24800	25400	40400	157000	51200	37900	30900	36600
10	45000	42500	32800	24200	25300	28200	41500	149000	50000	37800	31500	36200
11	44100	42100	33100	25200	27000	30700	46900	128000	52700	37700	33600	36000
12	43800	41800	33300	26800	29700	31300	44900	151000	79400	38400	34600	36000
13	44100	41900	33500	27900	30000	30600	43300	190000	83200	41600	33600	35800
14	44900	41900	33200	27300	30800	29200	47400	209000	80100	40800	32900	35700
15	44800	41900	33000	27000	31300	28200	46700	195000	70800	39400	34100	36100
16	47400	41800	32300	28300	31000	27900	45200	162000	71700	39000	33700	36600
17	56600	41500	31500	29700	30800	28000	43500	128000	67700	39100	34200	37200
18	54900	41400	30900	30600	30900	29700	42000	98700	59700	37600	37400	37500
19	49000	41400	30600	31400	31100	35800	41200	83200	55000	36300	36900	37900
20	46000	41300	30400	31200	32500	38800	41600	76200	53400	35900	37600	38300
21	44700	42000	29800	29900	42800	35200	49200	69900	51900	35400	38800	38100
22	43900	42400	29500	28800	44500	31500	80400	63500	50200	35000	39300	36900
23	43500	42300	29800	29400	38800	30000	81700	58700	49100	34100	42500	36400
24	43700	42500	31000	30400	35300	29800	62900	59200	47700	33400	45800	36700
25	45100	42400	31800	29900	33700	30300	54500	75800	47000	32600	44200	36500
26	45300	42900	31500	28800	32200	32700	50600	103000	46900	32100	50200	35400
27	44700	43900	30800	28000	30700	36500	51900	93500	46500	32400	58300	34400
28	43600	44700	30600	27700	29400	39600	77900	78200	45700	31900	50400	33700
29	43100	45600	30300	27100	---	41000	92600	73100	45300	33200	46700	33400
30	42800	45300	29300	27400	---	39800	77600	68300	44800	35300	44100	33500
31	43000	---	27900	33200	---	37800	---	64200	---	36500	41600	---
MEAN	47720	42600	33050	27300	31770	31150	50660	100300	57090	37190	37730	36670
MAX	58400	45600	43300	33200	44500	41000	92600	209000	83200	41800	58300	40000
MIN	42800	41300	27900	22600	24700	25400	38500	48500	44800	31900	30700	33400

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
MEAN	45770	43730	29230	28180	45380	64060	71850	103200	106100	54940	43630	46210
MAX	47720	44860	33050	29060	58990	96960	93040	106000	155200	72690	49530	55750
(WY)	2002	2001	2002	2001	2001	2001	2001	2001	2001	2001	2001	2001
MIN	43820	42600	25410	27300	31770	31150	50660	100300	57090	37190	37730	36670
(WY)	2001	2002	2001	2002	2002	2002	2002	2002	2002	2002	2002	2002

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 2001 - 2002

ANNUAL MEAN	69960	44520	56840
HIGHEST ANNUAL MEAN			69160
LOWEST ANNUAL MEAN			44520
HIGHEST DAILY MEAN	261000	Jun 8	261000
LOWEST DAILY MEAN	23900	Jan 1	18400
ANNUAL SEVEN-DAY MINIMUM	24100	Jan 1	19900
MAXIMUM PEAK FLOW	---		272000
MAXIMUM PEAK STAGE	---		31.66
INSTANTANEOUS LOW FLOW	---		18300
10 PERCENT EXCEEDS	124000		107000
50 PERCENT EXCEEDS	55500		43500
90 PERCENT EXCEEDS	30700		28000

## LAMINE RIVER BASIN

06906800 LAMINE RIVER NEAR OTTERVILLE, MO

LOCATION.--Lat 38°42'09", long 92°58'42", in NE ¼ NE ¼ NW ¼ sec.2, T.45 N., R.19 W., Cooper County, Hydrologic Unit 10300103, on left bank at the left downstream end of Highway A, 7.2 mi downstream from confluence of Flat Creek and Richland Creek, 2.2 mi upstream from Otter Creek, and 1.1 mi east of Otterville.

DRAINAGE AREA.--543 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1987 to current year.

GAGE.--Water-stage recorder. Datum of gage is 652.87 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S.G.S satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	14	39	31	2660	57	177	331	115	16	7.9	9.7
2	10	39	39	30	900	e65	136	259	97	16	7.5	8.6
3	9.7	33	37	28	485	e80	138	194	82	16	7.0	7.8
4	9.2	63	36	27	341	e100	113	146	65	16	6.8	7.3
5	17	38	36	27	255	151	93	116	59	15	6.5	6.7
6	142	28	35	28	205	320	77	159	57	16	6.5	6.0
7	160	23	34	28	172	360	70	2080	55	16	6.4	5.6
8	57	20	34	28	143	308	73	15400	54	15	6.0	5.4
9	30	18	33	29	123	312	87	20200	50	14	5.9	5.4
10	571	17	33	30	113	501	87	4790	47	14	5.6	5.2
11	341	16	32	30	99	329	75	859	46	14	5.4	4.7
12	106	16	34	31	87	247	67	809	395	35	5.5	4.3
13	84	15	39	30	77	196	61	3410	745	110	6.9	4.2
14	60	15	45	30	69	160	56	1150	324	57	8.8	4.9
15	52	14	57	30	64	142	53	545	159	32	14	5.9
16	145	14	98	29	58	122	49	428	92	24	12	5.5
17	277	14	150	28	54	105	45	2520	64	19	9.9	5.1
18	139	15	163	27	50	95	42	4040	48	17	11	4.9
19	68	18	132	28	57	91	42	911	40	16	10	5.3
20	44	38	101	28	208	91	1560	495	36	14	9.0	6.6
21	34	36	80	28	314	88	2000	355	33	13	8.4	7.1
22	29	30	69	27	224	77	1070	274	30	12	13	6.5
23	25	27	59	27	150	68	513	223	28	12	30	5.7
24	22	58	52	28	117	65	323	347	25	11	70	5.5
25	19	306	46	28	96	75	218	1170	24	11	46	5.5
26	17	140	43	27	80	78	151	781	24	12	37	5.3
27	16	76	41	26	68	71	2810	381	21	11	23	5.0
28	15	51	40	26	59	65	4990	266	19	9.8	17	4.6
29	15	43	37	25	---	70	933	214	18	9.4	14	4.3
30	14	41	35	64	---	294	467	177	17	8.9	12	4.1
31	14	---	33	7430	---	284	---	141	---	8.3	11	---
MEAN	82.4	42.5	56.2	268	262	164	552	2038	95.6	19.7	14.2	5.76
MAX	571	306	163	7430	2660	501	4990	20200	745	110	70	9.7
MIN	9.2	14	32	25	50	57	42	116	17	8.3	5.4	4.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1987 - 2002, BY WATER YEAR (WY)

MEAN	195	526	317	332	640	576	925	1356	671	656	150	293
MAX	2130	3347	1564	956	2422	2174	3809	4718	3176	4077	850	3689
(WY)	1999	1993	1993	1999	1997	1998	1994	1990	1998	1993	1995	1993
MIN	7.73	7.43	11.1	16.1	35.0	46.4	22.2	38.8	10.5	11.0	3.40	4.03
(WY)	1993	2000	1990	2000	1996	1996	2000	1992	1988	1988	1991	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1987 - 2002
ANNUAL MEAN	581	301	552
HIGHEST ANNUAL MEAN			1464
LOWEST ANNUAL MEAN			155
HIGHEST DAILY MEAN	19100	Apr 4	47000
LOWEST DAILY MEAN	8.0	Jan 3,4	1.3
ANNUAL SEVEN-DAY MINIMUM	8.9	Jan 1	1.4
MAXIMUM PEAK FLOW	---	22200	84900
MAXIMUM PEAK STAGE	---	21.25	29.43
INSTANTANEOUS LOW FLOW	---	3.9	1.2
ANNUAL RUNOFF (INCHES)	14.54	7.54	13.81
10 PERCENT EXCEEDS	824	343	781
50 PERCENT EXCEEDS	62	39	74
90 PERCENT EXCEEDS	14	7.1	9.1

e Estimated

## LITTLE CHARITON RIVER BASIN

175

06907300 LAMINE RIVER NEAR PILOT GROVE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 38°53'32", long 93°02'00", in SE  $\frac{1}{4}$  NW  $\frac{1}{4}$  NW  $\frac{1}{4}$  sec.32, T.48 N., R.19 W., Cooper County, Hydrologic Unit 10300102, located approximately 2 mi southeast of County Highway Z on Shackleford Road.

DRAINAGE AREA.--949 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 06...	1350	ENVIRONMENTAL		87	8.0	79	7.2	332	13.7	160	38.7	15.9	4.77	
JAN 08...	1355	ENVIRONMENTAL		51	15.6	113	7.9	361	1.1	--	--	--	--	
FEB 04...	1430	ENVIRONMENTAL		526	13.0	97	7.5	247	2.9	--	--	--	--	
04...	1431	REPLICATE		--	--	--	--	--	--	--	--	--	--	
MAR 06...	1700	ENVIRONMENTAL		234	17.5	142	8.9	376	5.2	--	--	--	--	
APR 10...	1205	ENVIRONMENTAL		128	11.3	111	8.4	414	14.1	--	--	--	--	
MAY 07...	1550	ENVIRONMENTAL		2030	6.7	73	7.6	248	18.5	110	29.3	8.41	4.70	
JUN 11...	0845	ENVIRONMENTAL		98	7.9	99	7.9	410	25.1	--	--	--	--	
JUL 16...	1330	ENVIRONMENTAL		94	6.4	81	7.7	250	26.6	110	27.8	10.3	5.18	
SEP 05...	0910	ENVIRONMENTAL		17	4.3	54	7.8	425	25.7	--	--	--	--	
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 06...	7.04	142	142	173	0	12.4	E.1	14.0	74	192	<.04	.53	E.02	
JAN 08...	--	186	189	231	0	--	--	--	<10	--	<.04	.39	2.26	
FEB 04...	--	74	73	89	0	--	--	--	68	--	.12	1.1	2.26	
04...	--	--	--	--	--	--	--	--	68	--	.10	1.1	2.27	
MAR 06...	--	152	152	162	12	--	--	--	26	--	<.04	.99	E.04	
APR 10...	--	148	149	177	2	--	--	--	28	--	<.04	.72	E.04	
MAY 07...	5.49	97	97	118	0	7.04	<.1	11.9	395	186	E.04	2.1	1.35	
JUN 11...	--	154	157	191	0	--	--	--	26	--	<.04	.70	1.65	
JUL 16...	5.87	103	104	127	0	7.59	.1	10.1	111	149	<.04	.88	<.05	
SEP 05...	--	155	155	190	0	--	--	--	23	--	<.04	.68	E.03	

## LITTLE CHARITON RIVER BASIN

06907300 LAMINE RIVER NEAR PILOT GROVE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
NOV 06...	E.006	.10	.07	.20	62	58	48	80	348	1.2	<.04	<.1	<6
JAN 08...	E.004	1.16	1.15	1.33	<1	K2	K5	--	--	--	--	--	--
FEB 04...	.020	.24	.20	.35	K180	900	K2260	--	--	--	--	--	--
04...	.015	.21	.19	.36	--	--	--	--	--	--	--	--	--
MAR 06...	.011	.08	.08	.28	K2	K7	48	--	--	--	--	--	--
APR 10...	E.005	.25	.23	.35	59	64	K18	--	--	--	--	--	--
MAY 07...	.052	.29	.25	.72	31000	K70000	78000	348	3430	1.5	E.03	E.1	E3
JUN 11...	.012	.29	.27	.39	43	49	42	--	--	--	--	--	--
JUL 16...	<.008	E.05	.04	.21	160	400	220	3	1300	2.2	<.04	E.1	<6
SEP 05...	<.008	.09	.07	.17	K66	100	160	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 06...	138	.12	1	76.7	<.01	<.3	5	7
JAN 08...	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--
MAY 07...	338	1.05	7	23.1	.02	E.2	13	22
JUN 11...	--	--	--	--	--	--	--	--
JUL 16...	E7	<.08	3	74.0	.01	<.3	2	9
SEP 05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

06908000 BLACKWATER RIVER NEAR BLUE LICK, MO

LOCATION.--Lat 38°59'32", long 93°11'48", in SW ¼ SW ¼ SW ¼ sec.26, T.49 N., R.21 W., Saline County, Hydrologic Unit 10300104, on left bank at upstream side of bridge on northbound lane of U.S. Highway 65, 1.2 mi downstream from Finney Creek, 1.8 mi southeast of Blue Lick, and at mile 30.3.

DRAINAGE AREA.--1,120 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1922 to September 1933, May 1938 to current year. Published as "at Blue Lick" for periods of record from 1922 to 2000.

REVISED RECORDS.--WSP 1006: 1929. WDR MO-84-1: 1982(M).

GAGE.--Water-stage recorder. Datum of gage is 593.79 ft above National Geodetic Vertical Datum of 1929. Prior to July 25, 1925, nonrecording gage at site 75 ft downstream at datum 0.10 ft lower; July 25 to Sept. 30, 1933, and May 23, 1938 to Dec. 3, 1956, nonrecording gage at site 25 ft downstream at same datum; Dec. 4, 1956, to Oct. 1, 1986, at site 0.5 mi upstream at present datum.

REMARKS.--Records good except for estimated daily discharges in December and January, which are fair, and those in March, which are poor. U.S. Army Corps of Engineers satellite telemeter at station. Published as "Blackwater River at Blue Lick" for periods of record from 1922 to 2000.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	30	15	17	13	3280	45	42	897	395	25	38	7.2
2	26	14	15	e12	1860	e45	49	508	296	22	26	6.8
3	21	13	13	11	669	e46	41	356	234	20	17	6.1
4	18	14	14	e11	410	e48	36	259	204	27	13	5.5
5	897	15	16	11	287	e50	30	212	823	129	11	5.1
6	1350	14	15	11	201	58	27	1900	1230	47	10	4.8
7	581	16	17	11	158	73	25	9050	588	20	9.5	4.7
8	173	17	21	11	138	88	27	9500	264	17	8.7	4.6
9	104	17	21	12	124	119	34	12600	172	63	8.6	4.5
10	79	17	17	14	113	130	46	14500	140	68	7.9	4.5
11	114	18	17	15	103	107	66	18500	137	50	7.3	5.9
12	147	21	19	18	91	93	64	19300	6340	302	6.8	5.8
13	124	18	30	21	81	81	54	18200	5230	254	7.2	5.4
14	84	17	51	22	76	72	83	16000	2810	255	7.1	5.3
15	100	17	72	22	72	66	90	13400	1180	178	7.7	8.3
16	654	17	62	22	68	60	70	10900	590	97	7.4	6.5
17	612	19	53	23	64	56	58	6520	301	59	7.1	5.8
18	250	18	44	22	61	51	50	3340	195	38	27	10
19	124	19	38	24	61	50	58	2410	146	25	21	15
20	87	20	33	25	82	50	167	1390	123	22	363	13
21	67	24	29	24	306	49	1990	744	109	17	155	11
22	54	31	26	25	285	46	3120	498	91	18	38	9.3
23	44	28	24	30	162	42	1340	372	74	17	16	9.2
24	37	25	e20	30	115	38	452	335	62	14	79	13
25	28	22	19	33	93	36	252	2560	54	13	54	12
26	22	20	17	33	77	36	168	5190	48	11	32	10
27	20	21	16	30	64	39	2230	6200	43	11	19	8.7
28	21	21	15	26	51	41	5580	4980	37	10	13	7.6
29	20	20	14	23	---	40	4870	1830	33	52	11	7.4
30	16	20	e14	89	---	40	2620	951	28	82	9.0	6.5
31	15	---	e13	2270	---	40	---	579	---	55	7.8	---
MEAN	191	18.9	25.6	95.0	327	59.2	791	5935	733	65.1	33.7	7.65
MAX	1350	31	72	2270	3280	130	5580	19300	6340	302	363	15
MIN	15	13	13	11	51	36	25	212	28	10	6.8	4.5
IN.	0.20	0.02	0.03	0.10	0.30	0.06	0.79	6.11	0.73	0.07	0.03	0.01

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	563	607	458	464	762	1038	1455	1317	1291	835	298	614
MAX	9500	6100	3359	2326	5206	4706	8473	8090	6235	8855	1835	5979
(WY)	1987	1929	1983	1974	1985	1973	1973	1995	2001	1951	1998	1961
MIN	0.13	0.32	1.66	1.55	5.54	9.50	29.6	9.93	18.4	1.78	1.61	0.13
(WY)	1957	1957	1957	1957	1954	1956	1977	1932	1956	1933	1930	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	1419		696		810	
HIGHEST ANNUAL MEAN					2540	
LOWEST ANNUAL MEAN					95.8	
HIGHEST DAILY MEAN	19300	Jun 8	19300	May 12	48400	Nov 18 1928
LOWEST DAILY MEAN	9.5	Jan 1,2	4.5	Sep 9,10	0.00	Jul 17-31 1980
ANNUAL SEVEN-DAY MINIMUM	10	Jan 1	4.8	Sep 4	0.00	Jul 17 1980
MAXIMUM PEAK FLOW			19700	May 11	54000	Nov 18 1928
MAXIMUM PEAK STAGE			34.84	May 11	41.53	Oct 3 1986
INSTANTANEOUS LOW FLOW			4.1	Sep 10	0.00	Jul 17-31 1980
ANNUAL RUNOFF (INCHES)	17.20		8.44		9.83	
10 PERCENT EXCEEDS	5640		1040		2430	
50 PERCENT EXCEEDS	161		38		90	
90 PERCENT EXCEEDS	17		9.8		4.9	

e Estimated

## MISSOURI RIVER MAIN STEM

06909000 MISSOURI RIVER AT BOONVILLE, MO

LOCATION.--Lat 38°58'42", long 92°45'13", sec.35, T.49 N., R.17 W., Cooper County, Hydrologic Unit 10300102, on downstream side of second pier from right abutment of Missouri-Kansas-Texas Railroad Company Bridge at Boonville and at mile 196.6.

DRAINAGE AREA.--500,700 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

PERIOD OF RECORD.--October 1925 to current year. Gage-height records collected at same site 1893-99 are in reports of the Missouri River Commission; since 1900 in reports of the National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 565.42 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1928, nonrecording gage at site 0.4 mi downstream at datum 3.14 ft lower; Oct. 1, 1928, to May 9, 1931, nonrecording gage at site 50 ft upstream from present site at present datum; May 10, 1931, to Apr. 12, 1934, water-stage recorder at site 0.4 mi downstream at datum 3.14 ft lower.

REMARKS.--Records fair except for period May 1 to Aug. 30 and estimated daily discharges, which are poor. Some regulation from many upstream reservoirs. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 21, 1844, reached a stage of 32.7 ft, discharge, about 710,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers. Flood of June 6, 1903, reached a stage of 30.5 ft, discharge, about 612,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	53700	43700	44800	28700	49700	30800	38700	66500	62800	42600	36400	40600
2	52300	43400	42800	28100	45000	30700	40000	57500	62300	40600	34800	39600
3	52900	42600	41800	27100	37700	30500	39300	52800	60500	40200	33500	39200
4	54000	42200	40500	26300	33600	30200	39000	50100	59300	39600	32800	39200
5	e54500	42500	38400	26100	31600	29700	39000	47800	57300	39700	32200	38400
6	59800	42700	36500	25600	30200	28600	39800	52600	56300	40300	31700	37700
7	57100	42700	35000	25100	28800	27700	40700	116000	56100	39300	31500	37600
8	50500	42800	33300	25200	27800	28700	41200	156000	54800	38500	31200	37700
9	47000	42600	32400	25500	27600	28400	41000	180000	52600	38300	31300	37500
10	45300	42500	32500	25800	27800	29300	41000	189000	51700	38200	31600	37100
11	44500	42200	33200	26400	28200	31900	44900	170000	51500	38100	32700	36600
12	44200	42000	33200	27200	30100	32800	46200	176000	90200	39000	34100	36600
13	44100	42000	33500	28300	31000	32500	43800	206000	100000	40300	34000	36600
14	44400	42000	33400	28500	31400	31500	45500	228000	91400	41900	33000	36400
15	e45000	42100	33300	28100	32000	30600	47400	222000	75000	39800	33200	36600
16	47400	41900	33000	28500	32000	30200	45400	191000	70300	39000	33800	37000
17	56100	41600	32200	29500	31800	30100	43400	151000	68800	38700	33400	37600
18	59500	41400	31600	30300	31800	30500	41700	115000	61200	38100	37400	38100
19	54000	41400	31300	31000	32000	33600	41100	90500	55600	36600	39500	38200
20	49600	41200	31100	31300	32300	38200	41200	78600	53400	36100	38800	38500
21	47800	41500	30800	30600	38000	37300	49100	72100	52200	35900	e40300	38600
22	46600	42200	30300	29500	45100	33900	75400	66200	50500	35600	e39700	37100
23	45900	42600	30100	29300	41400	31800	90200	61400	49300	35100	e40700	35700
24	45700	42600	30700	30000	37200	31400	67400	59000	48000	34500	e43700	35800
25	46500	42600	31600	30300	35300	31500	56300	67700	46800	33700	e44300	36300
26	47200	43100	31600	29800	33700	32600	51300	99600	46500	33100	e45100	36100
27	47000	43700	31200	29200	32400	35300	53400	101000	46200	33200	e58000	35500
28	45800	44800	30900	28900	31400	38300	80900	80600	45400	32900	e52300	35400
29	44900	46100	30800	28700	---	40400	103000	72500	44900	33200	e46900	35600
30	44200	46400	30300	29100	---	40500	83800	68600	44600	34800	e44600	35900
31	43600	---	29400	36300	---	38900	---	64400	---	36400	42300	---
MEAN	49070	42700	33600	28530	33820	32530	51700	110000	58850	37530	37900	37290
MAX	59800	46400	44800	36300	49700	40500	103000	228000	100000	42600	58000	40600
MIN	43600	41200	29400	25100	27600	27700	38700	47800	44600	32900	31200	35400
IN.	0.11	0.09	0.08	0.07	0.07	0.07	0.12	0.25	0.13	0.09	0.09	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	65810	61960	45270	36020	49610	71030	90920	93650	95120	84470	63960	66300
MAX	187800	139100	106200	90150	106300	183900	212700	234700	201100	375200	213600	165900	
(WY)	1974	1999	1983	1973	1982	1973	1973	1995	1984	1993	1993	1993	
MIN	36280	24600	13840	14770	17620	19460	39060	40770	41990	37530	36570	36730	
(WY)	1965	1991	1964	1963	1964	1964	1989	1989	1988	2002	1991	1991	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002 <sup>a</sup>
ANNUAL MEAN	73440	46210	68710
HIGHEST ANNUAL MEAN			140500
LOWEST ANNUAL MEAN			39070
HIGHEST DAILY MEAN	294000	Jun 8	721000
LOWEST DAILY MEAN	26300	Jan 6,7	5000
ANNUAL SEVEN-DAY MINIMUM	26600	Jan 5	5730
MAXIMUM PEAK FLOW	---		755000
MAXIMUM PEAK STAGE	---		37.10
INSTANTANEOUS LOW FLOW	---		5500
ANNUAL RUNOFF (INCHES)	1.99		1.86
10 PERCENT EXCEEDS	131000		124000
50 PERCENT EXCEEDS	57100		55100
90 PERCENT EXCEEDS	31600		29400

<sup>e</sup> Estimated

<sup>a</sup> Post-regulation period.



06910750 MOREAU RIVER NEAR JEFFERSON CITY, MO

LOCATION.--Lat 38°31'44", long 92°11'31", SE ¼ NW ¼ SE ¼ sec.25, T.44 N., R.11 W., Cole County, Hydrologic Unit 10300102, near right bank on downstream side of right pier of bridge on Tanner Bridge Road, 3 mi south of Jefferson City, 15.8 mi downstream from confluence of North and South Moreau Creeks, and at mile 17.

DRAINAGE AREA.--561 mi<sup>2</sup>.

PERIOD OF RECORD.--December 1947 to September 1974, November 13, 2000 to current year. Published as Moureau River near Jefferson City (06910500), 1948 to 1974. Discharge measurements only October 1956 to September 1957.

GAGE.--Water-stage recorder. Datum of gage is 546.33 ft above National Geodetic Vertical Datum of 1929. Prior to Aug. 17, 1958, nonrecording gage, and Aug. 17, 1958, to May 21, 1969, water-stage recorder at site 10 mi upstream and at datum 16.4 ft higher, drainage area 531 mi<sup>2</sup>.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1905 reached a stage of 38.2 ft, flood of 1929 reached a stage of 32.91 ft, and flood of 1943 reached a stage of 35.1 ft, present site, from information and floodmarks by local residents

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	55	73	65	8100	87	320	373	234	38	18	26
2	20	135	72	61	1230	134	255	291	185	33	16	22
3	20	151	76	57	652	319	285	238	153	32	16	18
4	18	134	80	54	471	352	227	199	129	181	14	16
5	45	108	77	51	361	283	192	170	254	154	13	12
6	52	103	71	52	298	434	164	154	264	94	13	11
7	74	87	67	53	262	615	148	1410	186	64	12	11
8	107	75	63	54	236	407	197	9310	148	47	11	9.1
9	103	67	59	56	213	319	534	17200	116	37	10	7.9
10	3600	60	57	58	193	286	379	16600	103	134	9.3	7.2
11	6230	e57	55	58	176	254	272	2300	93	58	10	6.4
12	972	e53	94	60	164	230	212	1010	1230	2870	13	6.2
13	811	51	192	61	152	204	177	9230	4840	1520	17	5.8
14	474	49	229	60	140	186	158	5640	1850	396	27	6.4
15	327	47	198	58	131	169	145	924	487	219	23	8.3
16	321	45	289	55	123	157	134	e732	304	136	18	7.3
17	514	43	628	53	118	146	121	820	212	93	15	8.7
18	315	44	549	51	111	135	111	6030	157	72	147	9.4
19	210	50	372	51	110	139	105	1280	121	59	57	8.5
20	158	58	260	50	154	173	1160	656	98	50	572	11
21	125	118	198	50	177	194	2740	459	83	44	92	11
22	103	119	162	50	151	164	2250	360	71	39	40	13
23	88	91	141	51	144	148	723	299	63	37	34	12
24	227	80	127	55	129	134	431	1300	56	34	58	14
25	241	71	115	54	118	156	305	2890	50	32	221	16
26	136	90	102	55	107	270	235	840	46	30	159	14
27	98	139	93	55	98	408	632	503	42	29	89	11
28	82	106	88	54	91	317	5250	354	51	26	61	11
29	72	86	83	53	---	362	1180	330	63	22	46	8.3
30	64	79	77	166	---	809	530	425	46	20	37	7.5
31	58	---	72	6450	---	526	---	309	---	20	31	---
MEAN	506	81.7	156	265	515	275	652	2666	391	214	61.3	11.2
MAX	6230	151	628	6450	8100	809	5250	17200	4840	2870	572	26
MIN	18	43	55	50	91	87	105	154	42	20	9.3	5.8
IN.	1.04	0.16	0.32	0.54	0.96	0.56	1.30	5.48	0.78	0.44	0.13	0.02

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	322	218	212	351	457	626	564	612	637	320	113	270
MAX	2076	1298	1040	1591	1866	3169	2256	2815	2548	2237	534	2987	
(WY)	1970	1973	1969	1949	1951	1973	1973	1970	1948	1951	1950	1965	
MIN	0.81	1.03	4.29	5.57	7.75	11.9	9.36	29.7	13.2	4.41	1.78	1.35	
(WY)	1954	1954	1954	1964	1954	1954	1956	1965	1952	1959	1953	1960	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	486		484		384	
HIGHEST ANNUAL MEAN					881	
LOWEST ANNUAL MEAN					50.4	
HIGHEST DAILY MEAN	14100	Feb 25	17200	May 9	20800	Jun 23 1948
LOWEST DAILY MEAN	7.1	Aug 22	5.8	Sep 13	0.10	Sep 30 1956
ANNUAL SEVEN-DAY MINIMUM	9.3	Aug 18	6.8	Sep 10	0.21	Sep 24 1956
MAXIMUM PEAK FLOW	---		19100	May 9	24400	Oct 14 1969
MAXIMUM PEAK STAGE	---		26.13	May 9	28.60	Oct 14 1969
INSTANTANEOUS LOW FLOW	---		5.4	Sep 13,14	0.10	Sep 30 1956
ANNUAL RUNOFF (INCHES)	11.78		11.73		9.32	
10 PERCENT EXCEEDS	667		654		671	
50 PERCENT EXCEEDS	98		107		68	
90 PERCENT EXCEEDS	20		16		6.2	

e Estimated

## OSAGE RIVER BASIN

06916675 MIAMI CREEK NEAR BUTLER, MO

LOCATION.--Lat 38°12'41", long 94°22'40", in NW ¼ SW ¼ NE ¼ sec.6, T.39 N., R.31 W., Bates County, Hydrologic Unit 10290102, on right downstream pier on county road bridge, 2.25 mi southwest of junction of Highways 71 and 52.

DRAINAGE AREA.--137 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for discharges below 5 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	1.9	0.93	0.74	385	8.4	3.8	56	35	1.0	1.4	0.02
2	3.2	1.9	0.84	0.68	126	9.5	3.9	44	28	0.69	0.93	0.02
3	2.9	1.9	0.75	0.61	70	11	3.7	34	24	0.53	0.76	0.02
4	89	1.6	0.82	0.54	51	11	3.2	27	20	0.40	0.62	0.05
5	1580	1.5	0.89	0.50	36	11	3.0	20	29	0.39	0.52	0.11
6	626	1.9	0.86	0.76	26	13	2.7	15	32	0.29	0.49	0.04
7	66	2.8	1.2	0.94	22	23	2.7	240	22	0.13	0.24	0.02
8	32	2.5	1.8	0.93	20	36	2.7	1680	19	0.09	0.04	0.02
9	18	2.1	1.6	1.1	18	28	3.2	2140	17	0.06	0.02	0.03
10	16	1.8	1.2	1.3	15	21	4.3	1420	18	0.07	0.02	0.02
11	16	2.1	1.0	1.3	13	18	4.0	203	18	0.19	0.02	0.02
12	9.9	2.2	3.0	1.6	12	15	36	138	32	0.73	0.05	0.02
13	6.4	2.2	4.0	1.8	11	13	134	682	105	1.3	0.10	0.02
14	3.0	2.4	4.6	1.9	9.7	12	52	313	52	1.3	0.10	0.10
15	8.5	2.2	4.5	1.8	8.9	11	29	106	26	0.66	0.08	1.7
16	103	2.0	3.8	1.7	8.1	9.6	19	75	18	0.35	0.19	2.7
17	61	1.5	4.2	1.7	7.7	8.8	14	100	14	0.16	0.42	1.1
18	22	4.2	3.7	1.5	7.4	8.2	11	138	11	0.08	1.1	0.48
19	11	5.2	3.3	1.6	12	7.3	9.4	71	9.5	0.08	1.4	1.1
20	7.1	2.8	3.1	1.7	26	6.4	9.5	44	8.2	0.09	1.3	1.9
21	4.7	1.2	3.3	1.8	57	5.7	106	34	6.7	0.08	1.2	2.0
22	3.4	1.5	3.0	1.8	41	5.7	289	28	5.7	0.08	0.94	2.0
23	2.2	1.3	2.4	2.0	24	6.2	82	23	4.3	0.13	0.75	1.7
24	2.1	1.5	1.8	1.8	18	5.7	36	435	3.3	0.51	0.56	1.4
25	1.9	1.4	1.6	2.3	15	5.5	23	1820	2.6	0.58	0.59	1.2
26	1.4	2.0	1.5	1.9	11	5.4	17	1320	2.2	0.51	0.42	0.81
27	1.3	1.6	1.4	1.7	8.9	5.2	261	195	1.5	0.38	0.42	0.55
28	1.4	1.2	1.5	1.5	8.7	5.2	1320	185	1.9	0.31	0.37	0.75
29	1.4	0.96	1.4	1.4	---	5.4	211	93	2.9	1.7	0.31	0.77
30	1.5	0.98	1.1	25	---	5.4	85	61	1.7	2.8	0.15	0.63
31	2.0	---	0.92	458	---	4.6	---	46	---	2.1	0.02	---
MEAN	87.3	2.01	2.13	16.9	38.2	11.0	92.7	380	19.0	0.57	0.50	0.71
MAX	1580	5.2	4.6	458	385	36	1320	2140	105	2.8	1.4	2.7
MIN	1.3	0.96	0.75	0.50	7.4	4.6	2.7	15	1.5	0.06	0.02	0.02

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

ANNUAL MEAN	54.7
HIGHEST DAILY MEAN	2140 May 9
LOWEST DAILY MEAN	0.02 Several Days
ANNUAL SEVEN-DAY MINIMUM	0.02 Sep 7
MAXIMUM PEAK FLOW	2180 May 9
MAXIMUM PEAK STAGE	19.38 May 9
INSTANTANEOUS LOW FLOW	0.01 Aug 31-Sep 4, Sep 7-9,13,14
10 PERCENT EXCEEDS	68
50 PERCENT EXCEEDS	2.7
90 PERCENT EXCEEDS	0.19

06917060 LITTLE OSAGE RIVER AT HORTON, MO

LOCATION.--Lat 37°59'38", long 94°22'07", in SW ¼ NE ¼ NW ¼ sec. 17, T.37 N., R.31 W., Vernon County, Hydrologic Unit 10290103, on left bank at the upstream side of the southbound bridge of U.S. Highway 71, 4 mi above Marmaton River, and 1 mi north of Horton.

DRAINAGE AREA.--498 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2000 to current year. Nov. 18, 1988 to Sept. 30, 2000, stage only.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above sea level.

REMARKS.--Records poor. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 1986 reached a stage of 59.4 ft (by U.S. Army Corps of Engineers).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.7	4.1	9.7	5.2	989	36	18	e482	617	60	0.80	0.00
2	3.3	3.8	8.7	4.7	e461	37	16	259	305	40	1.8	0.00
3	3.2	13	7.9	4.4	e278	36	14	199	201	30	1.9	0.00
4	4.5	9.3	7.3	4.0	e184	37	13	161	164	25	0.60	0.00
5	24	7.2	6.5	3.9	e149	41	11	134	e141	23	0.02	0.00
6	124	5.4	6.3	4.2	e113	44	10	e239	130	19	0.01	0.00
7	209	4.5	6.2	4.3	e94	52	9.7	e511	142	17	0.00	0.00
8	133	4.2	5.8	4.2	e79	61	9.8	e2100	155	16	0.00	0.00
9	89	4.5	5.4	4.2	e65	71	10	e4500	148	11	0.00	0.00
10	211	4.6	5.0	4.5	e56	67	10	6150	601	10	0.00	0.00
11	215	4.2	4.9	5.0	e50	62	11	e2400	442	23	0.00	0.00
12	157	3.8	5.9	5.4	e46	65	11	e1250	711	28	0.00	0.00
13	90	3.7	8.3	5.6	e42	66	11	2930	e1380	64	0.00	0.00
14	47	3.5	9.8	5.7	e38	63	21	e1440	2280	26	0.00	0.00
15	31	3.2	11	5.7	e35	61	27	e950	e1350	13	0.00	0.00
16	33	3.0	14	5.8	e31	56	26	e1310	e726	8.6	0.00	0.00
17	60	2.8	17	5.8	e28	52	21	1740	328	6.2	0.00	0.00
18	90	3.4	18	5.8	26	48	18	e1110	215	5.0	0.00	0.00
19	60	4.5	17	6.2	25	45	16	e725	172	9.1	0.00	0.00
20	34	4.4	16	6.2	29	42	18	e511	143	9.0	0.00	0.00
21	20	4.3	14	6.3	40	40	449	e364	121	5.3	0.00	0.00
22	13	4.6	13	6.4	65	38	707	295	103	3.1	0.00	0.00
23	11	6.4	11	6.8	74	35	362	215	88	3.0	0.00	0.00
24	9.4	6.8	9.8	7.2	58	32	223	e436	76	2.2	0.00	0.00
25	8.2	6.4	9.0	7.6	50	30	163	e944	64	0.60	0.00	0.00
26	7.2	6.1	8.1	8.1	46	28	128	e2690	55	0.69	0.00	0.00
27	6.4	5.1	7.4	8.4	42	26	514	4500	47	0.20	0.00	0.00
28	6.0	4.5	6.8	7.8	38	24	e1780	e3210	40	0.02	0.00	0.00
29	5.6	5.4	6.5	7.3	---	23	2140	e2240	76	0.01	0.00	0.00
30	5.1	10	6.4	42	---	21	e861	e2380	91	0.04	0.00	0.00
31	4.6	---	5.7	e417	---	19	---	1050	---	1.0	0.00	---
MEAN	55.4	5.22	9.30	20.2	115	43.8	254	1530	370	14.8	0.16	0.00
MAX	215	13	18	417	989	71	2140	6150	2280	64	1.9	0.00
MIN	3.2	2.8	4.9	3.9	25	19	9.7	134	40	0.01	0.00	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	MEAN	38.4	8.57	6.91	50.6	338	316	352	852	592	60.3	9.20	2.82
MAX	55.4	11.9	9.30	80.9	561	588	450	1530	812	106	18.2	5.64	
(WY)	2002	2001	2002	2001	2001	2001	2001	2002	2001	2001	2001	2001	
MIN	21.3	5.22	4.52	20.2	115	43.8	254	174	370	14.8	0.17	0.00	
(WY)	2001	2002	2001	2002	2002	2002	2002	2001	2002	2002	2002	2002	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR				FOR 2002 WATER YEAR				WATER YEARS 2001 - 2002			
ANNUAL MEAN	235				203				218			
HIGHEST ANNUAL MEAN									232			
LOWEST ANNUAL MEAN									203			
HIGHEST DAILY MEAN	4330				Jun 4				6150			
LOWEST DAILY MEAN	0.62				Aug 23				0.00			
ANNUAL SEVEN-DAY MINIMUM	1.6				Aug 18				0.00			
MAXIMUM PEAK FLOW	---				Unknown				May 11			
MAXIMUM PEAK STAGE	---				44.92				May 11			
INSTANTANEOUS LOW FLOW	---				0.00				Many Days			
10 PERCENT EXCEEDS	622				454				511			
50 PERCENT EXCEEDS	40				11				17			
90 PERCENT EXCEEDS	3.6				0.00				1.5			

e Estimated

## OSAGE RIVER BASIN

06917680 DRY WOOD CREEK NEAR DEERFIELD, MO

LOCATION.--Lat 37°47'52", long 94°30'54", in SW ¼ SE ¼ sec.24, T.35 N., R.33 W., Vernon County, Hydrologic Unit 10290104, on left downstream pier on State Highway KK bridge, 7.2 mi southwest of Nevada.

DRAINAGE AREA.--358 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.1	7.5	11	11	2300	26	27	197	176	33	8.2	2.1
2	4.1	57	10	9.7	521	30	26	150	139	25	8.0	2.0
3	3.9	89	9.6	8.7	232	38	24	114	113	22	7.0	2.2
4	3.9	81	9.2	8.2	167	56	23	92	96	20	6.2	2.8
5	9.5	44	8.8	8.2	127	59	20	76	83	20	5.4	5.0
6	121	29	8.4	8.5	108	82	19	66	81	19	4.8	8.8
7	86	22	8.1	9.1	98	142	19	1020	77	18	4.4	12
8	38	18	7.8	9.6	92	117	20	7830	67	16	4.0	6.7
9	26	15	7.6	10	82	96	22	10400	84	15	3.7	4.7
10	1020	15	7.4	10	74	83	26	7790	1190	14	3.9	3.7
11	531	16	7.2	11	64	76	29	4860	329	13	4.3	3.1
12	94	14	7.0	12	56	65	35	2310	2110	22	3.8	3.0
13	50	13	7.2	13	51	59	32	3580	2280	19	3.6	2.9
14	34	12	28	14	47	54	28	2130	1080	16	3.4	3.7
15	25	11	53	12	44	51	26	605	352	14	3.4	7.0
16	20	11	49	11	42	45	24	373	172	12	3.4	27
17	18	12	40	11	39	40	23	1770	132	11	4.6	19
18	16	13	45	10	44	37	21	3620	106	10	5.2	11
19	15	14	50	10	46	37	22	1290	90	9.9	4.7	9.7
20	15	23	38	10	51	39	62	468	74	11	4.2	9.6
21	13	26	29	11	59	43	469	313	61	12	4.5	19
22	12	23	24	12	56	42	251	235	52	11	4.4	14
23	10	19	21	13	46	36	119	186	44	9.3	3.9	9.6
24	9.6	17	19	14	40	33	83	1640	39	8.4	3.1	7.1
25	7.9	15	16	16	36	33	62	4670	34	8.2	2.9	5.7
26	7.3	15	14	17	33	33	51	3560	31	8.1	2.9	4.6
27	7.4	14	13	17	29	34	1290	1760	29	7.3	2.7	4.1
28	8.5	14	13	16	27	32	4090	1570	26	6.3	2.3	3.5
29	8.9	13	12	14	---	31	2040	577	53	6.9	2.2	3.0
30	8.3	12	12	25	---	30	412	316	50	6.9	2.2	2.8
31	7.7	---	12	2280	---	29	---	228	---	9.0	2.2	---
MEAN	72.1	22.8	19.3	85.2	165	51.9	313	2058	308	14.0	4.18	7.31
MAX	1020	89	53	2280	2300	142	4090	10400	2280	33	8.2	27
MIN	3.9	7.5	7.0	8.2	27	26	19	66	26	6.3	2.2	2.0

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

ANNUAL MEAN	262	
HIGHEST DAILY MEAN	10400	May 9
LOWEST DAILY MEAN	2.0	Sep 2
ANNUAL SEVEN-DAY MINIMUM	2.2	Aug 28
MAXIMUM PEAK FLOW	11100	May 9
MAXIMUM PEAK STAGE	22.56	May 9
INSTANTANEOUS LOW FLOW	1.9	Sep 2
10 PERCENT EXCEEDS	321	
50 PERCENT EXCEEDS	20	
90 PERCENT EXCEEDS	4.4	

06918065 MARMATON RIVER BELOW NEVADA, MO

LOCATION.--Lat 37°55'07", long 94°21'39", in NE ¼ SE ¼ NE ¼ sec.8, T.36 N., R.31 W., Vernon County, Hydrologic Unit 10290104, on right bank at the upstream side of the southbound bridge of U.S. Highway 71, 21 mi above Osage River, and 4.2 mi north of Nevada.

DRAINAGE AREA.--1,090 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2000 to current year. Nov. 17, 1988, to Sept. 30, 2000, stage only station.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of October 1986 reached a stage of 62.2 ft (by U.S. Army Corps of Engineers).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	14	19	16	16	3960	72	87	2170	e1200	100	e18	8.9
2	14	43	15	15	2950	79	69	941	842	76	e16	9.2
3	14	136	14	15	1300	84	58	632	468	65	e14	9.5
4	14	109	13	13	676	97	54	479	332	58	e13	6.9
5	28	93	13	13	461	124	51	350	270	61	e12	5.4
6	46	73	13	e13	364	155	42	265	266	53	e12	4.0
7	159	58	13	e14	277	227	40	1100	275	50	e14	4.4
8	129	45	27	e16	238	325	42	6660	238	48	14	11
9	64	35	37	e17	213	276	44	15500	232	46	12	18
10	1080	29	29	e18	191	239	41	21800	1110	46	11	14
11	2240	25	23	e20	168	211	44	e12000	1580	e54	12	12
12	887	23	22	e20	145	188	51	e5000	2460	e71	11	9.9
13	256	22	28	e19	121	165	54	e8000	5000	e94	11	8.1
14	131	20	28	e18	107	153	52	e5000	5100	e75	13	9.0
15	89	18	37	e17	97	142	50	e2600	4020	e50	11	15
16	68	17	60	e17	89	131	52	e2000	2310	e49	11	14
17	52	16	62	e16	83	111	51	e2800	954	e48	11	19
18	43	17	56	e16	77	101	45	e4500	526	e44	13	33
19	36	22	57	e15	81	95	48	e3000	376	e46	12	29
20	31	22	63	e14	91	95	66	e1800	287	e43	12	25
21	28	23	56	e15	98	91	302	e1000	228	e40	12	24
22	26	30	46	e16	110	92	1020	e750	187	e36	13	27
23	25	28	38	e18	122	92	730	e600	156	e32	13	28
24	22	26	32	e20	122	85	420	2220	131	e28	13	22
25	19	23	29	e24	106	78	279	5320	108	e26	13	17
26	17	21	25	e24	96	75	209	5800	95	e24	12	15
27	16	19	22	e22	81	73	1450	6160	84	e22	11	12
28	15	17	21	e20	75	74	5040	e5200	79	e20	11	11
29	16	17	19	e18	---	72	5380	e4200	95	e18	8.4	9.5
30	15	16	17	30	---	87	4400	e2800	118	e22	7.7	9.2
31	16	---	16	1500	---	103	---	e2000	---	e20	8.3	---
MEAN	181	35.4	30.6	65.5	446	129	676	4279	971	47.3	12.1	14.7
MAX	2240	136	63	1500	3960	325	5380	21800	5100	100	18	33
MIN	14	16	13	13	75	72	40	265	79	18	7.7	4.0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

MEAN	119	43.9	28.8	193	1219	643	603	2299	1288	167	25.3	17.9
MAX	181	52.5	30.5	321	1992	1157	676	4279	1604	287	38.5	21.1
(WY)	2002	2001	2002	2001	2001	2001	2002	2002	2001	2001	2001	2001
MIN	57.3	35.4	27.1	65.5	446	129	530	319	971	47.3	12.1	14.7
(WY)	2001	2002	2001	2002	2002	2002	2001	2001	2002	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2001 - 2002	
ANNUAL MEAN	531		577		549	
HIGHEST ANNUAL MEAN					577	
LOWEST ANNUAL MEAN					522	
HIGHEST DAILY MEAN	5070	Feb 11	21800	May 10	21800	May 10 2002
LOWEST DAILY MEAN	13	Dec 4-7	4.0	Sep 6	4.0	Sep 6 2002
ANNUAL SEVEN-DAY MINIMUM	14	Dec 1	6.9	Sep 1	6.9	Sep 1 2002
MAXIMUM PEAK FLOW	---		22400	May 10	22400	May 10 2002
MAXIMUM PEAK STAGE	---		52.57	May 10	52.57	May 10 2002
INSTANTANEOUS LOW FLOW	---		4.0	Sep 6	0.00	Oct 10 2000
10 PERCENT EXCEEDS	1950		1360		1790	
50 PERCENT EXCEEDS	59		46		48	
90 PERCENT EXCEEDS	18		13		15	

e Estimated

## OSAGE RIVER BASIN

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO

LOCATION.--Lat 38°03'20", long 94°08'44", in SE 1/4 SW 1/4 NW 1/4 sec.20, T.38 N., R.29 W., Bates County, Hydrologic Unit 10290105, on downstream side of left pier of bridge on State Highway M, 0.8 mi downstream from Shaw Branch, 0.2 mi upstream from McKenzie Creek, and 3.0 mi northwest of Schell City.

DRAINAGE AREA.--5,410 mi<sup>2</sup>, by U.S. Army Corps of Engineers.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1981 to current year.

GAGE.--Water-stage recorder and slope gage 1.7 mi downstream. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. Discharge is calculated using fall computations due to backwater from Harry S. Truman Reservoir. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum daily discharge, 133,000 ft<sup>3</sup>/s, Oct. 5, 1986.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 35,500 ft<sup>3</sup>/s, May 14; minimum, 78 ft<sup>3</sup>/s, Sept 10.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	622	177	e900	337	4760	498	201	7670	11200	617	165	128
2	572	192	e1000	346	5060	482	205	3730	7600	546	171	119
3	564	199	e1050	332	3220	498	182	2260	5870	499	162	e115
4	545	225	1000	317	1830	509	165	1720	3820	496	156	e110
5	2210	238	975	314	1320	514	156	1340	3680	521	156	e105
6	3290	222	987	316	1080	549	149	1060	4850	478	164	e95
7	1950	208	999	310	928	547	148	2380	5260	467	166	89
8	1090	208	916	302	810	599	144	12000	5480	446	164	87
9	691	192	853	291	709	641	156	17800	5570	437	164	86
10	1740	187	721	248	612	620	157	23200	6350	415	168	78
11	2260	192	539	233	549	612	170	31900	7720	391	163	88
12	2040	193	522	267	500	591	214	34300	8130	397	166	86
13	1030	187	505	467	476	560	303	34900	11400	655	173	87
14	673	187	425	486	456	710	387	35500	13400	588	170	92
15	638	186	381	488	427	533	756	32400	13800	750	165	97
16	585	189	356	473	422	507	820	23400	10300	770	184	99
17	572	193	365	489	411	479	555	15700	5780	704	178	106
18	507	198	392	478	392	455	431	12200	3770	624	171	102
19	545	206	396	461	399	426	341	10800	2990	518	172	113
20	491	205	378	385	432	405	368	9660	2710	413	193	116
21	453	206	373	341	546	375	1490	6960	2480	291	177	119
22	425	211	349	340	779	335	2430	5670	1990	236	159	123
23	374	227	360	329	847	312	3530	4500	1760	231	146	115
24	321	e215	364	349	882	322	4440	8200	1500	229	127	118
25	271	e205	371	350	807	328	2620	17800	1220	213	129	112
26	242	e195	372	313	687	291	1490	23600	1090	197	129	105
27	199	e190	356	248	606	255	2970	28000	939	170	128	97
28	196	e185	349	225	533	231	9380	31100	737	167	128	97
29	195	e185	358	221	---	222	11000	32200	532	169	130	95
30	185	e400	358	270	---	210	11000	29000	647	170	129	93
31	183	---	344	2160	---	208	---	19600	---	158	128	---
MEAN	828	207	568	403	1089	446	1879	16790	5086	418	158	102
MAX	3290	400	1050	2160	5060	710	11000	35500	13800	770	193	128
MIN	183	177	344	221	392	208	144	1060	532	158	127	78

e Estimated

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--March 1979 to September 1993, November 1994 to current year. Formerly published as Osage River near Schell City (06918080).

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1979 to September 1981.

WATER TEMPERATURE: March 1979 to September 1981.

SUSPENDED-SEDIMENT: February 1991 to September 1999.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 1,950 microsiemens per centimeter, Oct. 11, 1980; minimum daily, 114 microsiemens per centimeter, June 12, 1981.

WATER TEMPERATURE: Maximum daily, 32.0 °C, July 11, 1980; minimum daily, 0.0 °C, Feb. 5, 1980, and Feb. 11-14, 1981.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 4,020 mg/L, Feb. 21, 1997; minimum daily mean, 8 mg/L, Aug. 4 and 5, 1993, and Jan. 10-12, 1995.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 160,000 tons, Feb. 21, 1997; minimum daily, 1.7 tons, Nov. 7-13, 1991.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)	
NOV 28...	1310	ENVIRONMENTAL	185	8.6	73	8.0	521	7.6	210	62.7	14.1	5.00	
MAR 11...	1345	ENVIRONMENTAL	612	11.3	97	8.3	606	7.7	--	--	--	--	
APR 15...	1610	ENVIRONMENTAL	949	9.9	113	8.1	522	20.0	--	--	--	--	
MAY 22...	1430	ENVIRONMENTAL	6400	6.5	72	7.9	370	18.7	170	54.5	7.51	3.55	
JUN 17...	1245	ENVIRONMENTAL	5600	4.7	58	7.4	300	24.0	--	--	--	--	
JUL 24...	1320	ENVIRONMENTAL	229	1.6	22	8.0	446	31.4	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE, DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 28...	24.7	151	151	184	0	19.1	.3	91.2	24	332	<.04	.75	<.05
MAR 11...	--	126	125	143	5	--	--	--	50	--	<.04	.73	.09
APR 15...	--	176	178	217	0	--	--	--	183	--	<.04	1.1	.09
MAY 22...	9.32	124	124	152	0	5.97	.2	33.6	49	194	E.02	.86	.65
JUN 17...	--	107	106	129	0	--	--	--	252	--	<.04	1.5	.35
JUL 24...	--	137	137	167	0	--	--	--	E90	--	<.04	.75	.49
DATE	NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 28...	<.008	E.03	<.02	.09	K32	K43	K14	33	423	.8	<.04	<.1	<6
MAR 11...	E.006	<.06	<.02	.09	K4	K16	K38	--	--	--	--	--	--
APR 15...	.015	E.04	E.01	.26	160	164	164	--	--	--	--	--	--
MAY 22...	.026	.10	.06	.16	71	88	152	108	760	1.6	E.02	E.1	<6
JUN 17...	.084	.10	E.01	.35	54	290	450	--	--	--	--	--	--
JUL 24...	.009	E.06	.05	.17	K8	K14	104	--	--	--	--	--	--

## OSAGE RIVER BASIN

06918070 OSAGE RIVER ABOVE SCHELL CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)
NOV 28...	66	.09	1	97.1	E.01	<.3	38	9	<.002	<.004	<.002	<.005	.304
MAR 11...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	.471
APR 15...	--	--	--	--	--	--	--	--	<.006	.064	<.004	<.005	.831
MAY 22...	240	.32	2	61.6	E.01	1.1	49	6	<.006	.110	.044	<.005	2.38
JUN 17...	--	--	--	--	--	--	--	--	<.006	.196	.294	<.005	3.77
JUL 24...	--	--	--	--	--	--	--	--	<.006	.050	.095	<.005	.852
DATE	BEN- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)
NOV 28...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.054	<.005	<.005	<.02	<.002	<.009
MAR 11...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.068	<.005	<.005	<.02	<.002	<.009
APR 15...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.081	<.005	<.005	<.02	<.002	<.009
MAY 22...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.218	<.005	<.005	<.02	<.002	<.009
JUN 17...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.265	<.005	<.005	<.02	<.002	<.009
JUL 24...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.135	<.005	<.005	<.02	<.002	<.009
DATE	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)
NOV 28...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.042	<.006	<.002	<.007	<.003	<.007
MAR 11...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.019	<.006	<.002	<.007	<.003	<.010
APR 15...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.088	<.006	<.002	<.007	<.003	<.010
MAY 22...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.295	<.006	<.002	<.007	<.003	<.010
JUN 17...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.613	.035	<.002	<.007	<.003	<.010
JUL 24...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.197	<.006	<.002	<.007	<.003	<.010



06918070 OSAGE RIVER ABOVE SCHELL CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
NOV 28...	<.002	<.010	<.006	<.011	E.01	<.004	<.010	<.011	<.30	E.009	<.02	<.034	<.02
MAR 11...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.009	<.02	<.034	<.02
APR 15...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.013	<.02	<.034	<.02
MAY 22...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.012	<.02	<.034	<.02
JUN 17...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUL 24...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.010	<.02	<.034	<.02

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
NOV 28...	<.005	<.002	<.009
MAR 11...	<.005	<.002	<.009
APR 15...	<.005	<.002	<.009
MAY 22...	<.005	<.002	<.009
JUN 17...	<.005	<.002	<.009
JUL 24...	<.005	<.002	<.009

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## OSAGE RIVER BASIN

06918440 SAC RIVER NEAR DADEVILLE, MO

LOCATION.--Lat 37°26'35", long 93°41'05", in NE ¼ NE ¼ NW ¼ sec.9, T.31 N., R.25 W., Dade County, Hydrologic Unit 10290106, on downstream side of bridge on State Highway 245, 2 mi upstream from Cave Spring Branch, and 2 mi south of Dadeville.

DRAINAGE AREA.--257 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1966 to current year. Annual maximum only, for water years 1965-66.

GAGE.--Water-stage recorder. Datum of gage is 869.78 ft above National Geodetic Vertical Datum of 1929 (levels by the Missouri State Highway and Transportation Commission). Prior to June 1966, crest-stage gage at same site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	55	87	166	1030	160	349	285	e940	134	51	25
2	16	84	92	156	751	190	329	268	e850	132	46	24
3	15	105	92	148	612	197	302	250	e750	142	42	24
4	15	103	91	142	519	196	281	234	e680	133	39	23
5	25	92	86	138	458	207	265	221	e600	125	37	21
6	26	84	80	135	420	247	251	211	e530	119	34	19
7	25	77	74	128	388	271	241	285	e485	113	33	19
8	23	70	69	122	356	278	252	4840	e436	108	33	19
9	23	66	63	120	334	280	248	4800	e400	104	31	17
10	1850	61	59	116	311	262	231	2730	e360	101	31	17
11	432	57	56	111	288	253	218	1580	e323	99	34	17
12	414	53	97	107	273	246	209	1720	e295	102	35	17
13	324	49	161	104	256	235	201	3510	e267	109	32	16
14	252	47	183	101	243	227	289	2490	e245	102	38	16
15	207	45	180	95	232	219	269	2110	e223	95	34	19
16	185	41	272	92	219	213	244	2010	e208	89	31	24
17	e163	39	722	89	208	205	230	2610	e190	88	30	22
18	142	38	700	87	198	195	214	3270	e177	89	36	21
19	128	43	548	89	203	220	206	e1800	e165	125	44	22
20	111	45	452	85	218	283	367	e1230	153	124	49	23
21	102	41	394	84	205	311	740	872	e142	117	39	19
22	95	39	359	81	194	314	577	e1020	e133	96	32	17
23	84	40	328	81	189	313	488	e1340	e125	89	31	14
24	85	89	296	85	185	304	438	e1800	e118	79	41	12
25	90	82	270	87	179	595	388	2860	e112	73	49	11
26	83	73	250	87	172	624	370	e2400	176	68	35	11
27	77	65	233	85	166	546	359	e2000	163	64	33	10
28	72	60	217	84	162	496	343	e1650	157	59	30	10
29	68	61	203	83	---	454	312	e1430	149	56	28	10
30	64	70	187	189	---	412	295	e1240	141	56	26	9.9
31	59	---	176	828	---	377	---	e1100	---	54	25	---
MEAN	170	62.5	228	132	320	301	3167	1747	323	98.2	35.8	17.6
MAX	1850	105	722	828	1030	624	740	4840	940	142	51	25
MIN	15	38	56	81	162	160	201	211	112	54	25	9.9
IN.	0.76	0.27	1.02	0.59	1.30	1.35	1.38	7.84	1.40	0.44	0.16	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1966 - 2002, BY WATER YEAR (WY)

MEAN	138	290	295	232	291	428	396	392	216	114	61.7	108
MAX	780	1139	1058	743	918	1170	1427	1747	820	392	205	1545
(WY)	1987	1986	1993	1991	1985	1975	1994	2002	1995	1993	1968	1993
MIN	16.6	16.8	19.7	14.0	23.5	29.2	30.1	30.1	39.2	22.1	10.1	6.78
(WY)	1992	1981	1977	1981	1981	1996	1981	1977	1972	1980	1980	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1966 - 2002
ANNUAL MEAN	144	314	246
HIGHEST ANNUAL MEAN			560
LOWEST ANNUAL MEAN			50.2
HIGHEST DAILY MEAN	3310	Feb 25	4840 May 8
LOWEST DAILY MEAN	15	Oct 3,4	9.9 Sep 30
ANNUAL SEVEN-DAY MINIMUM	16	Sep 28	11 Sep 24
MAXIMUM PEAK FLOW	---		8080 May 8
MAXIMUM PEAK STAGE	---		18.17 May 8
INSTANTANEOUS LOW FLOW	---		9.4 Sep 30
ANNUAL RUNOFF (INCHES)	7.61		16.60
10 PERCENT EXCEEDS	272		617
50 PERCENT EXCEEDS	77		135
90 PERCENT EXCEEDS	24		25

e Estimated

06918460 TURNBACK CREEK ABOVE GREENFIELD, MO

LOCATION.--Lat 37°24'09", long 93°48'06", on line between secs.21 and 28, T.31 N., R.26 W., Dade County, Hydrologic Unit 10290106, on left downstream side of bridge pier on State Highway O, 1.5 mi downstream from Limestone Creek, and 2.0 mi southeast of Greenfield.

DRAINAGE AREA.--252 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1965 to current year.

REVISED RECORDS.--WDR MO-84-1: 1968, 1970, 1972-74, 1976, 1978-79, 1983 (M). WDR MO-93-1: 1987 (M).

GAGE.--Water-stage recorder. Datum of gage is 870.49 ft above National Geodetic Vertical Datum of 1929 (levels by the Missouri State Highway and Transportation Commission).

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	67	83	e150	1030	138	357	295	e820	113	103	25
2	20	76	87	e139	806	174	331	273	e750	112	97	24
3	19	84	88	e131	674	194	301	255	e675	119	90	23
4	18	86	86	e124	570	193	279	240	e610	114	84	20
5	29	81	84	e118	496	196	262	226	e550	110	79	19
6	33	77	81	e112	446	278	248	215	e502	103	74	18
7	34	75	78	e106	406	294	242	263	e460	98	72	16
8	30	72	75	102	368	307	264	8210	e420	93	70	15
9	33	68	71	97	339	303	267	3680	e387	89	66	13
10	2420	66	68	95	308	277	251	1730	e355	86	63	13
11	587	64	66	91	282	261	241	1210	e325	98	70	12
12	444	61	92	88	264	248	231	1500	e300	92	60	13
13	334	59	148	86	241	234	221	2920	e278	257	56	16
14	263	56	168	82	223	223	297	e1650	e258	154	58	21
15	219	55	185	79	208	210	279	e1000	e242	126	53	26
16	189	52	273	76	192	203	254	e1200	e228	111	49	33
17	167	51	705	75	180	188	241	e1600	e213	112	47	34
18	152	51	690	73	170	179	226	2140	197	1320	69	32
19	136	54	564	73	180	217	216	e1400	185	699	65	42
20	123	52	464	71	219	332	453	e1040	174	483	53	46
21	114	50	399	70	186	328	765	e830	164	314	46	22
22	105	50	353	70	174	320	596	695	157	246	40	18
23	100	48	310	69	169	314	503	e620	151	297	38	17
24	117	80	279	71	164	302	446	2140	144	222	39	17
25	105	82	253	73	158	700	390	e1900	139	190	44	17
26	93	80	233	71	152	637	373	e1680	144	168	38	16
27	84	78	217	69	144	580	362	e1470	139	151	35	16
28	79	78	201	68	139	531	341	e1300	133	138	32	16
29	75	77	186	67	---	484	306	e1180	125	125	29	15
30	71	79	171	216	---	434	288	e1020	119	118	28	15
31	69	---	160	1090	---	391	---	e930	---	111	26	---
MEAN	203	67.0	223	126	317	312	328	1446	312	212	57.2	21.0
MAX	2420	86	705	1090	1030	700	765	8210	820	1320	103	46
MIN	18	48	66	67	139	138	216	215	119	86	26	12
IN.	0.93	0.30	1.02	0.58	1.31	1.43	1.45	6.62	1.38	0.97	0.26	0.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	151	306	291	242	319	455	433	398	249	156	88.2	129																										
MAX	921	1385	982	765	1020	1377	1410	1797	874	636	354	1579																										
(WY)	1987	1986	1988	1973	1985	1973	1994	1990	1993	1992	1982	1993																										
MIN	23.4	21.7	20.2	19.9	27.5	27.1	39.3	93.9	44.3	24.2	14.4	11.6																										
(WY)	1979	1981	1990	1981	1981	1996	1981	1981	1972	1972	1980	1980																										

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1965 - 2002
ANNUAL MEAN	166	303	267
HIGHEST ANNUAL MEAN			612
LOWEST ANNUAL MEAN			84.1
HIGHEST DAILY MEAN	3550	Feb 24	8210
LOWEST DAILY MEAN	18	Oct 4	12
ANNUAL SEVEN-DAY MINIMUM	20	Sep 28	14
MAXIMUM PEAK FLOW	---		15500
MAXIMUM PEAK STAGE	---		20.75
INSTANTANEOUS LOW FLOW	---		11
ANNUAL RUNOFF (INCHES)	8.97		16.33
10 PERCENT EXCEEDS	324		674
50 PERCENT EXCEEDS	95		148
90 PERCENT EXCEEDS	26		33

e Estimated

## OSAGE RIVER BASIN

06918493 SOUTH DRY SAC RIVER NEAR SPRINGFIELD, MO

LOCATION.--Lat 37°15'58", long 93°14'56", in SW ¼ NW ¼ NE ¼ sec.5, T.29 N., R.21 W., Greene County, Hydrologic Unit 10290106, on downstream side of right wingwall on Barnes Road and 1 mile north of Springfield.

DRAINAGE AREA.--13.7 mi<sup>2</sup>.

PERIOD OF RECORD.--August 30, 1996 to present.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.8	4.7	7.5	7.9	71	8.6	30	18	25	4.1	3.3	3.0
2	2.7	13	6.3	7.3	45	22	31	17	23	4.1	3.3	2.8
3	2.6	12	5.6	6.9	36	20	25	14	22	4.2	3.2	2.8
4	2.6	9.2	5.1	6.7	30	18	10	13	20	4.2	3.1	2.7
5	6.5	7.8	4.7	6.4	26	17	16	12	19	3.9	3.0	3.2
6	4.4	7.0	4.7	6.2	24	17	19	12	19	3.8	3.0	2.7
7	4.5	6.4	4.3	6.0	22	16	13	72	17	3.8	2.9	2.6
8	4.5	6.1	4.2	5.8	19	15	23	436	16	3.8	2.8	2.4
9	4.5	5.5	3.9	5.8	17	14	23	134	15	3.6	2.8	2.4
10	18	5.3	3.7	5.6	16	14	18	78	14	3.9	2.8	2.4
11	21	5.1	3.6	5.5	14	12	16	63	13	5.4	2.7	2.4
12	15	5.0	7.2	5.5	13	12	14	59	19	11	2.8	2.4
13	12	4.8	12	5.4	12	11	12	102	15	10	3.7	2.3
14	11	4.5	12	5.3	12	11	12	71	13	7.4	3.4	2.4
15	9.5	4.3	11	5.2	11	10	11	58	12	7.2	3.0	2.6
16	9.7	4.2	87	5.1	11	9.7	9.6	51	10	5.2	2.8	2.3
17	8.4	4.2	94	5.1	9.7	9.2	9.3	338	9.4	4.5	8.7	2.4
18	7.3	4.0	48	5.1	9.4	9.1	8.5	122	8.6	6.2	8.9	2.3
19	6.6	4.0	36	5.1	11	24	8.3	96	7.8	9.0	4.6	3.0
20	6.1	4.0	29	5.1	14	32	e18	77	7.2	8.6	3.8	3.6
21	5.7	3.9	25	5.0	13	24	e40	66	7.2	7.1	3.4	2.6
22	5.3	3.8	22	5.0	12	21	32	56	6.5	5.4	3.1	2.2
23	8.0	3.9	19	5.5	11	20	e27	50	5.6	5.3	3.8	2.1
24	9.4	3.9	16	7.0	10	19	e22	48	5.1	4.7	10	2.0
25	8.0	3.8	14	7.4	9.4	113	20	43	4.7	4.3	9.1	1.9
26	6.8	3.7	13	6.9	9.2	50	22	39	4.7	4.2	5.5	1.8
27	6.0	3.6	12	6.5	8.8	49	24	35	4.5	4.0	4.1	1.7
28	5.5	3.6	11	6.3	8.2	47	24	33	4.4	4.0	4.1	1.7
29	5.3	3.8	10	6.4	---	28	20	32	4.3	3.9	3.5	1.7
30	5.1	6.4	9.1	31	---	15	18	29	4.2	3.5	3.4	1.9
31	5.0	---	8.4	185	---	25	---	27	---	3.4	3.1	---
MEAN	7.41	5.38	17.7	12.6	18.0	23.0	19.2	74.2	11.9	5.28	4.12	2.41
MAX	21	13	94	185	71	113	40	436	25	11	10	3.6
MIN	2.6	3.6	3.6	5.0	8.2	8.6	8.3	12	4.2	3.4	2.7	1.7

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

MEAN	6.23	13.6	10.8	10.1	22.1	27.7	18.5	24.5	9.94	17.1	4.98	4.21
MAX	11.2	58.3	21.5	15.7	35.3	57.3	51.3	74.2	17.0	63.2	8.83	8.17
(WY)	1999	1997	1997	1998	2001	1998	1999	2002	1999	2000	1998	1996
MIN	1.60	1.78	2.96	2.97	4.16	5.78	3.85	2.19	5.94	2.08	2.83	1.72
(WY)	2000	1998	2001	2000	2000	2000	2000	2000	1997	1997	1999	1999

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1996 - 2002

ANNUAL MEAN	10.9	16.8	14.1
HIGHEST ANNUAL MEAN			18.2
LOWEST ANNUAL MEAN			9.17
HIGHEST DAILY MEAN	241	Feb 24	436
LOWEST DAILY MEAN	1.6	Jan 5	1.7
ANNUAL SEVEN-DAY MINIMUM	1.9	Jan 1	1.8
MAXIMUM PEAK FLOW	---		1140
MAXIMUM PEAK STAGE	---		5.87
INSTANTANEOUS LOW FLOW	---		1.6
10 PERCENT EXCEEDS	19		32
50 PERCENT EXCEEDS	6.0		7.8
90 PERCENT EXCEEDS	3.5		2.9

e Estimated

06918600 LITTLE SAC RIVER NEAR WALNUT GROVE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°23'55", long 93°24'36", in SW ¼ NW ¼ SE ¼ sec.24, T.31 N., R.23 W., Greene County, Hydrologic Unit 10290106, approximately 7.5 mi east of Walnut Grove at bridge on Highway BB.

DRAINAGE AREA.--119 mi<sup>2</sup>.

PERIOD OF RECORD.--Water years 1974 to 1978, 1984 to 1986, 1988 to 1990, 1994 to 1996, October 1999 to current year. Published as "at Walnut Grove", for periods of record from 1994 to 2000.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT												
04...	1550	ENVIRONMENTAL	8.1	10.4	117	8.1	671	19.7	--	--	--	--
NOV												
26...	1430	BLANK	--	--	--	--	--	--	--	--	--	--
26...	1500	ENVIRONMENTAL	22	10.6	103	7.9	601	11.9	230	78.4	9.39	4.00
DEC												
10...	1130	ENVIRONMENTAL	18	12.7	105	8.0	619	5.9	--	--	--	--
JAN												
08...	1415	ENVIRONMENTAL	36	16.6	134	8.1	509	4.5	240	83.4	8.00	3.29
08...	1420	REPLICATE	--	--	--	--	--	--	230	79.5	7.64	3.11
FEB												
12...	1215	ENVIRONMENTAL	78	12.6	106	7.9	466	6.5	--	--	--	--
MAR												
13...	0950	ENVIRONMENTAL	78	12.4	113	8.2	452	9.0	--	--	--	--
APR												
15...	1230	ENVIRONMENTAL	111	10.1	112	8.2	443	18.6	--	--	--	--
15...	1231	REPLICATE	--	--	--	--	--	--	--	--	--	--
MAY												
20...	1520	ENVIRONMENTAL	526	10.8	113	8.0	427	16.3	200	72.2	5.09	1.62
JUN												
19...	0845	ENVIRONMENTAL	51	6.4	75	8.1	509	21.2	--	--	--	--
JUL												
22...	1425	ENVIRONMENTAL	24	8.7	116	8.1	521	27.7	210	73.9	6.27	4.29
AUG												
27...	1010	ENVIRONMENTAL	26	5.9	72	7.8	485	23.0	--	--	--	--
SEP												
11...	0930	ENVIRONMENTAL	8.0	4.8	59	7.9	668	23.1	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT													
04...	--	201	201	245	0	--	--	--	<10	--	<.04	.34	.66
NOV													
26...	--	--	--	--	--	--	--	--	--	--	<.04	<.10	<.05
26...	31.9	232	233	284	0	49.0	.2	16.4	20	274	<.04	.36	.91
DEC													
10...	--	232	235	287	0	--	--	--	<10	--	<.04	.25	1.03
JAN													
08...	17.4	224	226	276	0	30.1	E.1	14.2	<10	300	<.04	--	1.30
08...	17.1	--	--	--	--	29.5	.1	14.1	<10	296	E.02	.23	1.28
FEB													
12...	--	192	194	237	0	--	--	--	<10	--	<.04	.16	E1.82
MAR													
13...	--	176	176	215	0	--	--	--	<10	--	<.04	.23	.99
APR													
15...	--	189	189	230	0	--	--	--	18	--	<.04	.42	.85
15...	--	--	--	--	--	--	--	--	13	--	<.04	.42	.84
MAY													
20...	7.26	178	180	219	0	12.7	<.1	9.7	18	243	<.04	.27	1.34
JUN													
19...	--	197	197	240	0	--	--	--	<10	--	<.04	.26	2.11
JUL													
22...	22.7	189	191	233	0	29.7	.1	10.7	E18	243	<.04	.26	1.34
AUG													
27...	--	180	181	221	0	--	--	--	<10	--	<.04	.27	1.45
SEP													
11...	--	202	201	245	0	--	--	--	10	--	<.04	.37	.85

## OSAGE RIVER BASIN

06918600 LITTLE SAC RIVER NEAR WALNUT GROVE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 04...	E.005	.16	.13	.16	42	86	48	--	--	--	--	--	--
NOV 26...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
NOV 26...	E.006	.06	.04	.07	K5	140	41	14	52	.3	.06	<.1	<6
DEC 10...	E.004	.09	.08	.11	K18	24	26	--	--	--	--	--	--
JAN 08...	E.007	<.06	<.02	<.06	K1	K16	K15	13	30	.3	.03	<.1	<5
JAN 08...	.013	<.06	<.02	<.06	--	--	--	15	30	.3	E.03	<.1	<6
FEB 12...	<.006	<.06	E.02	E.04	K2	K10	K10	--	--	--	--	--	--
MAR 13...	E.004	<.06	<.02	<.06	K18	K6	K7	--	--	--	--	--	--
APR 15...	E.007	E.05	.03	.06	160	K755	180	--	--	--	--	--	--
APR 15...	.008	E.05	.03	.08	140	K795	160	--	--	--	--	--	--
MAY 20...	.015	.07	.04	.08	98	290	92	23	113	<.2	<.04	<.1	E4
JUN 19...	.013	.10	.07	.10	120	130	155	--	--	--	--	--	--
JUL 22...	.011	.20	.18	.21	49	130	96	2	156	.8	.08	<.1	E4
AUG 27...	E.004	.21	.17	.21	K30	240	280	--	--	--	--	--	--
SEP 11...	E.004	.34	.33	.37	110	240	360	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 04...	--	--	--	--	--	--	--	--
NOV 26...	--	--	--	--	--	--	--	--
NOV 26...	22	.22	<1	17.5	E.01	<.3	--	18
DEC 10...	--	--	--	--	--	--	--	--
JAN 08...	27	.14	<1	8.8	<.01	.2	--	7
JAN 08...	28	.14	<1	8.4	<.01	.4	--	7
FEB 12...	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--
APR 15...	--	--	--	--	--	--	--	--
MAY 20...	19	E.07	<1	13.0	<.01	E.2	--	4
JUN 19...	--	--	--	--	--	--	--	--
JUL 22...	<10	.18	1	16.8	<.01	<.3	8	9
AUG 27...	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

06918740 LITTLE SAC RIVER NEAR MORRISVILLE, MO

LOCATION.--Lat 37°28'58", long 93°29'07", in SW ¼ SW ¼ sec.20, T.32 N., R.23 W., Polk County, Hydrologic Unit 10290106, on downstream side of center pier of Hamilton Bridge on State Highway 215, 0.7 mi upstream from Slagle Creek, and 3 mi west of Morrisville.

DRAINAGE AREA.--237 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1968 to current year.

REVISED RECORDS.--WDR MO-84-1 1969-70, 1972-75, 1977-79, 1981, 1983 (M).

GAGE.--Water-stage recorder. Elevation of gage is 881 ft above National Geodetic Vertical Datum of 1929, from topographic map.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	7.2	34	117	e109	1460	101	258	258	257	37	15	13
2	6.8	70	110	e101	768	185	247	232	238	36	14	14
3	5.9	126	100	e95	561	235	224	213	218	39	13	13
4	5.7	120	89	e89	442	215	206	194	207	42	14	11
5	15	107	83	e84	377	224	188	180	244	43	14	10
6	20	93	74	e79	343	280	178	168	208	37	13	9.5
7	27	80	64	74	315	254	180	862	182	35	11	8.7
8	19	65	55	71	281	236	201	6890	166	33	10	8.6
9	15	61	48	66	259	223	213	3470	165	32	11	7.9
10	2200	55	43	63	243	199	196	1530	162	33	9.9	6.5
11	423	46	39	59	220	186	177	964	148	40	11	5.6
12	415	40	95	57	205	176	163	1830	148	39	13	5.8
13	273	37	274	55	187	163	155	4400	157	68	21	6.6
14	206	35	234	52	174	154	490	1330	131	60	16	10
15	166	33	203	49	162	156	273	859	115	51	16	e13
16	154	32	906	45	149	144	216	663	105	44	13	17
17	137	32	1810	45	140	135	195	3680	95	44	12	e14
18	122	30	839	44	133	126	182	2280	86	40	16	17
19	108	33	516	49	140	208	177	1200	78	53	54	e14
20	97	37	388	49	167	439	759	848	69	57	38	e12
21	88	38	321	46	150	357	1140	683	64	57	23	18
22	80	35	278	45	138	290	588	571	60	34	e20	17
23	74	34	241	50	130	260	437	487	55	29	e18	11
24	84	38	212	72	124	242	371	756	51	26	e16	7.6
25	89	42	188	104	119	942	319	658	50	23	e15	5.8
26	69	39	172	97	110	702	312	481	58	21	36	6.2
27	54	38	160	88	103	511	329	404	51	19	28	5.9
28	46	38	146	83	101	436	320	362	46	17	24	5.6
29	41	41	132	91	---	378	274	355	41	16	20	5.2
30	38	66	123	612	---	318	254	320	39	14	16	4.3
31	38	---	116	2400	---	275	---	285	---	15	15	---
MEAN	165	52.5	264	162	275	282	307	1207	123	36.6	18.2	10.1
MAX	2200	126	1810	2400	1460	942	1140	6890	257	68	54	18
MIN	5.7	30	39	44	101	101	155	168	39	14	9.9	4.3
IN.	0.80	0.25	1.28	0.79	1.21	1.37	1.45	5.87	0.58	0.18	0.09	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

MEAN	125	306	279	226	287	450	405	349	200	85.6	36.1	120
MAX	809	1256	1045	752	1139	1290	1409	1359	968	387	145	1691
(WY)	1987	1986	1988	1991	1985	1973	1994	1990	1995	2000	1988	1993
MIN	10.2	10.5	10.7	9.05	29.4	29.2	32.7	23.7	20.7	11.6	4.90	3.15
(WY)	1996	2000	1990	1981	1996	1996	1981	2000	1972	1980	1980	1980

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1969 - 2002	
ANNUAL MEAN	151		243		238	
HIGHEST ANNUAL MEAN					516	
LOWEST ANNUAL MEAN					58.6	
HIGHEST DAILY MEAN	6330	Feb 24	6890	May 8	18600	Sep 25 1993
LOWEST DAILY MEAN	5.7	Oct 4	4.3	Sep 30	0.60	Sep 15 1980
ANNUAL SEVEN-DAY MINIMUM	7.3	Sep 28	5.8	Sep 24	1.6	Aug 27 1980
MAXIMUM PEAK FLOW	---		10600	May 8	29100	Sep 25 1993
MAXIMUM PEAK STAGE	---		17.03	May 8	23.33	Sep 25 1993
INSTANTANEOUS LOW FLOW	---		3.0	Sep 30	0.30	Sep 15 1980
ANNUAL RUNOFF (INCHES)	8.65		13.92		13.67	
10 PERCENT EXCEEDS	272		483		517	
50 PERCENT EXCEEDS	73		91		81	
90 PERCENT EXCEEDS	18		13		12	

e Estimated

## OSAGE RIVER BASIN

06918990 STOCKTON LAKE NEAR STOCKTON, MO

LOCATION.--Lat 37°41'38", long 93°45'55", SW 1/4 SE 1/4 SW 1/4 sec.10, T.34 N., R.26 W., Cedar County, Hydrologic Unit 10290106, in power house at dam on Sac River, 2 mi east of Stockton.

DRAINAGE AREA.--1,160 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1969 to current year.

GAGE.--Water-stage recorder. Nonrecording gage prior to May 30, 1973. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by a rock shell earthfill type dam. Spillway is equipped with 4 tainter gates, 40 ft by 30.5 ft, crest elevation, 861.5 ft. Embankment closed and river diverted on Sept. 23, 1968. Gates closed and storage began on Dec. 12, 1969; minimum power elevation 830.0 ft reached on May 1, 1970. Gross storage at top of flood control pool is 1,666,659 ac-ft at elevation 892.0 ft, of which 779,550 ac-ft between elevations 867.0 ft and 892.0 ft is used for flood control, and 887,109 ac-ft between elevations 760.0 ft and 867.0 ft is used for multipurpose and power. Sedimentation reserve is 25,000 ac-ft. Lake is used for flood control, power, and recreational purposes. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,450,000 ac-ft, Apr. 28, 1973, elevation, 885.94 ft; minimum, since initial filling to minimum power pool level, 352,000 ac-ft, Aug. 27 to Sept. 4, 1970, elevation, 839.60 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,269,000 ac-ft, May 25 and 26, elevation, 881.05 ft; minimum, 765,000 ac-ft, Oct. 3, elevation, 862.36 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	862.40	864.25	864.51	865.47	867.31	867.87	870.46	870.75	880.01	872.44	868.87	866.23
2	862.38	864.34	864.53	865.49	867.58	867.93	870.45	870.73	879.74	872.26	868.83	866.21
3	862.36	864.36	864.56	865.56	867.75	867.99	870.41	870.66	879.48	872.07	868.73	866.07
4	862.42	864.37	864.59	865.56	867.86	868.07	870.35	870.60	879.29	871.88	868.63	865.93
5	862.57	864.39	864.59	865.56	867.97	868.13	870.33	870.57	879.04	871.77	868.47	865.80
6	862.56	864.40	864.56	865.59	868.08	868.22	870.39	870.48	878.77	871.79	868.40	865.63
7	862.56	864.41	864.47	865.63	868.19	868.34	870.45	871.01	878.48	871.69	868.26	865.63
8	862.55	864.40	864.47	865.65	868.30	868.45	870.42	873.56	878.17	871.50	868.09	865.60
9	862.78	864.42	864.49	865.65	868.41	868.51	870.43	874.89	877.96	871.29	867.94	865.53
10	863.57	864.41	864.37	865.66	868.52	868.59	870.43	875.47	877.75	871.10	867.96	865.37
11	863.76	864.41	864.25	865.69	868.62	868.65	870.40	875.79	877.47	870.88	867.93	865.31
12	863.89	864.41	864.27	865.69	868.58	868.71	870.37	877.29	877.24	870.70	867.80	865.24
13	863.98	864.41	864.17	865.72	868.56	868.72	870.43	878.43	877.02	870.73	867.71	865.23
14	864.03	864.41	864.21	865.71	868.53	868.77	870.48	878.85	876.71	870.73	867.73	865.22
15	864.09	864.42	864.27	865.72	868.46	868.83	870.40	879.04	876.37	870.51	867.57	865.28
16	864.10	864.42	864.41	865.71	868.44	868.88	870.43	879.32	876.09	870.40	867.56	865.21
17	864.13	864.42	864.57	865.74	868.49	868.93	870.29	880.17	875.77	870.29	867.54	865.19
18	864.14	864.45	864.77	865.79	868.55	869.01	870.23	880.65	875.47	870.28	867.48	865.10
19	864.16	864.44	864.86	865.80	868.55	869.09	870.23	880.93	875.13	870.19	867.36	865.11
20	864.19	864.45	864.97	865.81	868.47	869.10	870.41	881.00	874.77	870.10	867.22	865.11
21	864.20	864.44	865.08	865.82	868.37	869.11	870.62	880.89	874.45	870.00	867.09	865.04
22	864.23	864.44	865.12	865.84	868.27	869.13	870.68	880.73	874.11	869.91	866.96	865.06
23	864.25	864.49	865.18	865.84	868.30	869.21	870.69	880.56	873.77	869.83	866.84	865.03
24	864.25	864.47	865.22	865.86	868.29	869.33	870.67	880.86	873.40	869.71	866.87	865.01
25	864.24	864.49	865.27	865.84	868.19	869.54	870.67	881.05	873.20	869.56	866.88	864.99
26	864.23	864.48	865.33	865.85	868.00	869.73	870.69	881.05	873.01	869.46	866.71	864.97
27	864.24	864.47	865.36	865.86	868.01	869.92	870.73	880.96	872.83	869.47	866.57	864.96
28	864.24	864.47	865.37	865.87	867.90	870.04	870.80	880.82	872.64	869.48	866.47	864.95
29	864.23	864.49	865.40	865.88	---	870.17	870.79	880.63	872.66	869.28	866.35	864.94
30	864.24	864.51	865.43	866.22	---	870.26	870.87	880.45	872.65	869.19	866.24	864.83
31	864.25	---	865.46	866.89	---	870.35	---	880.24	---	869.07	866.23	---
MAX	864.25	864.51	865.46	866.89	868.62	870.35	870.87	881.05	880.01	872.44	868.87	866.23
MIN	862.36	864.25	864.17	865.47	867.31	867.87	870.23	870.48	872.64	869.07	866.23	864.83
(-)	809000	815000	838000	872000	897000	960000	974000	1243000	1021000	927000	856000	822000
(=)	+43000	+6000	+23000	+34000	+25000	+63000	+14000	+269000	-222000	-94000	-71000	-34000

CAL YR 2001....+111000

WTR YR 2002....+ 56000

(-) Contents, in acre-feet, at the end of the month.

(=) Change in contents, in acre-feet.



## 06919020 SAC RIVER AT HIGHWAY J BELOW STOCKTON, MO

LOCATION.--Lat 37°44'07", long 93°46'47", in NW ¼ sec.4, T.34 N., R.26 W., Cedar County, Hydrologic Unit 10290106, on right bank on downstream side of bridge on State Highway J, 4.5 mi downstream from Bear Creek, 6.3 mi downstream from Stockton Lake, 3.0 mi north of Stockton, and at mile 44.9.

DRAINAGE AREA.--1,292 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1973 to current year. Occasional discharge measurements in 1973 water year.

GAGE.--Water-stage recorder. Datum of gage is 750.19 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. Considerable regulation by Stockton Lake (06918990), 6.3 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	88	84	100	125	831	1620	154	2170	4780	2250	2060	93
2	87	98	99	123	461	541	348	1600	4600	2550	1550	90
3	85	116	98	120	362	204	1210	1320	4720	2550	788	1200
4	85	120	97	121	299	164	1440	1750	4210	2460	1320	1380
5	177	116	97	128	259	161	1020	1380	4520	1390	1740	1440
6	173	112	434	129	240	256	406	1240	4630	312	970	1740
7	109	110	814	128	231	232	127	1930	4640	795	1340	444
8	91	108	335	127	215	217	785	5370	4610	2610	1620	99
9	91	106	100	127	202	214	886	2400	4790	2610	1540	343
10	707	105	1130	127	192	204	967	877	4460	2590	316	1310
11	506	104	1360	126	179	184	846	531	4560	2580	100	928
12	317	103	899	125	699	176	1160	994	4530	2600	1310	674
13	237	102	1600	124	1570	611	146	6670	4490	364	1140	209
14	175	105	961	124	1160	175	513	1020	4920	123	377	92
15	149	103	358	122	1200	164	1940	1540	4540	2320	1300	95
16	143	102	227	120	864	155	640	1550	4520	1300	422	498
17	131	101	1630	120	165	150	2240	2600	4600	1420	105	625
18	127	102	1800	120	154	146	1640	994	4650	1480	734	1070
19	120	104	1110	122	1130	363	993	519	4740	2140	1520	645
20	113	101	228	121	1370	1160	1290	2070	4700	1500	1980	212
21	108	99	499	120	1690	995	1090	4570	4860	1420	1540	90
22	103	96	362	120	1770	861	1200	4720	4740	1490	1470	87
23	99	88	176	121	606	194	1500	4580	4740	1590	1350	85
24	98	123	164	116	158	185	1690	3340	4870	1540	325	84
25	96	124	155	608	1440	186	1370	667	4570	1570	102	83
26	92	111	149	124	2650	214	1580	2180	2620	1420	1320	83
27	90	104	145	118	557	188	1580	3650	2580	312	1440	82
28	88	100	141	116	1300	181	641	4090	2540	99	1110	82
29	87	99	138	116	---	174	1190	4600	339	1490	1350	82
30	87	100	133	176	---	167	605	4380	132	1310	1140	939
31	86	---	126	1740	---	160	---	4420	---	1350	312	---
MEAN	153	105	505	192	784	342	1040	2572	4140	1598	1087	496
MAX	707	124	1800	1740	2650	1620	2240	6670	4920	2610	2060	1740
MIN	85	84	97	116	154	146	127	519	132	99	100	82
IN.	0.14	0.09	0.45	0.17	0.63	0.31	0.90	2.30	3.58	1.43	0.97	0.43

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1974 - 2002, BY WATER YEAR (WY)

	MEAN	625	825	1167	1161	1142	1447	1739	1657	1620	1194	955	790
MAX	4922	4697	3983	4464	2763	4230	4613	3403	4863	4726	2488	1949	1949
(WY)	1994	1994	1986	1993	1988	1975	1974	1994	1990	1995	1992	1993	1993
MIN	51.1	60.1	61.9	66.7	98.8	64.8	60.5	110	186	121	71.6	80.4	80.4
(WY)	1974	1981	1981	1981	1981	1977	1981	2001	1991	1977	1991	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1974 - 2002	
ANNUAL MEAN	605		1083		1193	
HIGHEST ANNUAL MEAN					2450	
LOWEST ANNUAL MEAN					256	
HIGHEST DAILY MEAN	2910	Feb 28	6670	May 13	12800	Sep 25 1993
LOWEST DAILY MEAN	77	Sep 29	82	Sep 27-29	25	Mar 25 1977
ANNUAL SEVEN-DAY MINIMUM	80	Apr 30	83	Sep 23	33	Oct 20 1973
MAXIMUM PEAK FLOW	---		9930	May 13	14800	Oct 1 1986
MAXIMUM PEAK STAGE	---		21.19	May 13	24.91	Feb 23 1985
INSTANTANEOUS LOW FLOW	---		74	Sep 29	24	Mar 25 1977
ANNUAL RUNOFF (INCHES)	6.35		11.38		12.55	
10 PERCENT EXCEEDS	1950		2930		3200	
50 PERCENT EXCEEDS	175		434		568	
90 PERCENT EXCEEDS	92		99		70	

## OSAGE RIVER BASIN

06919500 CEDAR CREEK NEAR PLEASANT VIEW, MO

LOCATION.--Lat 37°50'03", long 93°52'31", in NE ¼ sec.2, T.35 N., R.27 W., Cedar County, Hydrologic Unit 10290106, on downstream side of right pier of bridge on State Highway 39, 1.5 mi north of Pleasant View, 1.8 mi downstream from Alder Creek, and 5.8 mi upstream from mouth.

DRAINAGE AREA.--420 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1923 to September 1926, October 1948 to current year.

REVISED RECORDS.--WSP 1146: 1923-26, drainage area. WSP 1176: 1924(M).

GAGE.--Water-stage recorder. Datum of gage is 739.46 ft above National Geodetic Vertical Datum of 1929. Apr. 22, 1923, to Sept. 30, 1926 and Oct. 1, 1948, to May 10, 1950, nonrecording gage at site 50 ft downstream at same datum; May 11, 1950, to Dec. 17, 1952, nonrecording gage, at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 27.7 ft, July 20, 1909, from floodmark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.0	13	16	e38	3600	99	103	346	197	42	6.6	1.5
2	0.98	17	15	e36	1210	127	95	275	159	28	5.9	1.5
3	0.93	19	14	e34	653	214	87	214	131	21	5.1	1.4
4	1.0	72	15	e33	467	248	81	174	109	20	4.3	1.4
5	7.3	95	15	e32	349	252	75	148	93	18	3.6	1.7
6	6.4	63	15	e31	289	605	71	129	84	13	3.1	1.4
7	65	50	16	e30	255	845	69	1340	76	13	2.7	1.1
8	45	40	15	e29	230	554	73	8470	68	27	2.4	0.98
9	21	34	15	28	206	411	77	10600	64	21	16	0.86
10	980	28	14	28	185	340	79	8400	74	15	32	0.76
11	1420	26	14	28	162	289	77	3740	142	13	17	0.67
12	330	24	18	29	147	255	74	960	127	13	12	0.61
13	e230	23	21	29	137	228	70	5450	117	14	8.3	0.55
14	e175	22	27	29	128	206	71	4360	148	13	6.7	0.49
15	e130	20	54	28	122	185	72	1150	107	78	6.1	0.46
16	88	19	84	27	118	164	72	663	76	69	5.1	0.42
17	78	17	97	26	113	150	70	2120	59	39	3.9	0.38
18	68	17	149	25	108	142	66	4900	52	30	3.3	0.36
19	58	19	210	26	111	139	62	2090	43	27	2.9	0.61
20	51	18	149	26	142	143	555	772	37	20	2.5	1.7
21	45	18	111	26	210	160	2190	567	32	15	2.2	3.1
22	38	17	91	28	179	163	1040	436	28	13	2.1	3.2
23	34	17	77	29	153	141	508	338	25	25	1.9	2.4
24	30	17	66	30	139	127	336	1260	22	17	1.7	1.6
25	25	17	59	30	129	123	243	2650	21	12	1.6	1.3
26	22	16	55	32	120	146	196	1050	19	21	1.4	4.1
27	19	15	50	34	109	222	719	591	18	33	1.2	4.6
28	18	15	47	35	102	164	1510	736	51	20	1.1	4.1
29	16	15	44	36	---	139	749	440	98	13	1.0	3.6
30	16	16	e42	66	---	125	450	317	83	9.8	1.1	3.5
31	14	---	e40	3050	---	112	---	248	---	7.6	1.3	---
MEAN	130	26.6	53.4	129	353	233	331	2095	78.7	23.2	5.36	1.68
MAX	1420	95	210	3050	3600	845	2190	10600	197	78	32	4.6
MIN	0.93	13	14	25	102	99	62	129	18	7.6	1.0	0.36
IN.	0.36	0.07	0.15	0.35	0.87	0.64	0.88	5.75	0.21	0.06	0.01	0.00

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	194	338	285	260	407	564	542	535	372	230	78.8	172
MEAN	194	338	285	260	407	564	542	535	372	230	78.8	172
MAX	3055	1923	1490	1063	2307	2275	2766	2969	1753	2229	641	2033
(WY)	1987	1993	1993	1949	1985	1973	1994	1961	1981	1958	1950	1993
MIN	0.00	0.00	0.06	0.12	0.14	0.23	4.09	39.1	4.52	0.03	0.00	0.00
(WY)	1954	1954	1954	1954	1954	1954	1956	1988	1991	1954	1954	1953

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	242	290	330
HIGHEST ANNUAL MEAN			807
LOWEST ANNUAL MEAN			16.0
HIGHEST DAILY MEAN	8300	Feb 25	26200
LOWEST DAILY MEAN	0.93	Oct 3	0.00
ANNUAL SEVEN-DAY MINIMUM	1.0	Sep 28	0.00
MAXIMUM PEAK FLOW	---		12000
MAXIMUM PEAK STAGE	---		22.65
INSTANTANEOUS LOW FLOW	---		0.28
ANNUAL RUNOFF (INCHES)	7.83		9.37
10 PERCENT EXCEEDS	492		483
50 PERCENT EXCEEDS	52		40
90 PERCENT EXCEEDS	2.1		2.2

e Estimated

## 06919900 SAC RIVER NEAR CAPLINGER MILLS, MO

LOCATION.--Lat 37°52'12", long 93°48'11", in NW ¼ NE ¼ SW ¼ sec.21, T.36 N., R.26 W., St. Clair County, Hydrologic Unit 10290106, on right downstream wingwall of bridge on State Highway W, 1.5 mi downstream from Cedar Creek, and 5.0 mi north of Caplinger Mills.

DRAINAGE AREA.--1,810 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1974 to current year.

GAGE.--Water-stage recorder. Datum of gage is 720.82 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Some regulation from Stockton Lake (06918990). U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	95	98	129	181	6140	2090	259	1930	5510	1610	1850	159
2	97	135	128	176	2380	1670	244	2780	5290	2750	2250	125
3	95	156	125	169	1330	478	1580	1090	5300	2890	1340	435
4	94	192	124	163	975	513	1220	2900	5120	2720	1340	1440
5	207	258	122	164	777	484	1480	1670	4780	1840	1570	1650
6	308	209	122	171	672	937	1010	1090	5240	1300	1800	1730
7	261	180	760	168	608	1290	207	4050	5070	192	1240	1670
8	254	164	986	167	551	949	335	17400	5090	2640	1580	155
9	185	155	142	166	499	779	1360	17400	5260	2960	2070	127
10	1860	147	612	168	450	677	1040	12300	5150	2920	1350	740
11	2460	142	e900	166	399	577	1040	6490	5030	3000	202	1390
12	1090	139	e800	164	365	517	1730	2100	5220	2830	358	1020
13	680	136	1530	162	2300	889	348	12200	5040	1520	1610	691
14	454	136	1470	160	1450	531	232	9190	5480	199	1300	128
15	358	136	905	158	984	394	1800	2910	5270	1620	396	117
16	291	130	335	154	1610	349	1120	2630	5020	1660	1560	110
17	242	128	1060	153	426	320	1660	5870	4870	1750	175	736
18	215	133	2570	154	272	303	2390	8090	5060	1590	281	939
19	198	142	1940	163	1200	308	1230	4070	5220	2530	1040	1100
20	181	134	587	162	1220	1520	2530	2470	5180	1730	2370	718
21	165	129	402	160	2080	1620	3550	5450	5290	1860	1450	138
22	151	125	921	160	2070	1320	2410	5750	5160	1530	1890	125
23	142	118	330	166	1540	472	2190	5660	5150	1130	1440	109
24	132	129	290	163	318	335	2570	6320	5330	1840	1330	94
25	126	180	265	607	1190	326	1790	4580	5330	1800	167	91
26	116	153	250	324	2410	363	2110	2940	3170	1840	352	88
27	109	134	240	175	1890	438	2710	5090	2860	1330	1820	84
28	104	127	228	168	373	379	3580	5070	2890	188	1410	85
29	99	128	219	165	---	333	1450	5630	1530	504	1410	89
30	98	132	204	277	---	305	2290	5310	330	1740	1450	233
31	97	---	191	5520	---	284	---	5180	---	1630	1190	---
MEAN	354	147	609	360	1303	702	1582	5665	4675	1795	1277	544
MAX	2460	258	2570	5520	6140	2090	3580	17400	5510	3000	2370	1730
MIN	94	98	122	153	272	284	207	1090	330	188	167	84
IN.	0.23	0.09	0.39	0.23	0.75	0.45	0.98	3.61	2.88	1.14	0.81	0.34

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1975 - 2002, BY WATER YEAR (WY)

MEAN	1204	1416	1653	1453	1745	2205	2457	2509	2152	1441	1052	996
MAX	11070	5392	5838	5487	5202	5630	6805	5782	7046	5283	2850	5283
(WY)	1987	1994	1986	1993	1985	1985	1994	1995	1995	1995	1992	1993
MIN	61.1	66.7	56.6	53.5	101	82.7	76.3	278	241	170	77.3	103
(WY)	1981	1981	1981	1981	1981	1981	1981	2001	1991	1988	1991	1991

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1975 - 2002	
ANNUAL MEAN	995		1585		1689	
HIGHEST ANNUAL MEAN					3267	
LOWEST ANNUAL MEAN					399	
HIGHEST DAILY MEAN	12400	Feb 25	17400	May 8,9	51200	Oct 2 1986
LOWEST DAILY MEAN	79	Sep 30	84	Sep 27	34	Aug 25 1999
ANNUAL SEVEN-DAY MINIMUM	90	Sep 24	91	Sep 23	47	Oct 7 1980
MAXIMUM PEAK FLOW	---		18600	May 8	61500	Apr 12 1994
MAXIMUM PEAK STAGE	---		23.90	May 8	30.95	Apr 12 1994
INSTANTANEOUS LOW FLOW	---		65	Sep 30	33	Aug 24 1999
ANNUAL RUNOFF (INCHES)	7.46		11.89		12.68	
10 PERCENT EXCEEDS	2370		5080		4100	
50 PERCENT EXCEEDS	483		779		965	
90 PERCENT EXCEEDS	128		129		95	

e Estimated

## OSAGE RIVER BASIN

06921070 POMME DE TERRE RIVER NEAR POLK, MO

LOCATION.--Lat 37°40'56", long 93°22'12", in NE ¼ NW ¼ NW ¼ sec.17, T.34 N., R.22 W., Polk County, Hydrologic Unit 10290107, on right bank 150 ft upstream from Jefferson Bridge on State Highway D, and 5 mi southwest of Polk.

DRAINAGE AREA.--276 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1968 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 872.61 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	9.8	42	50	103	2230	110	262	295	190	22	8.3	13
2	9.8	53	73	99	803	271	235	246	165	22	7.9	12
3	9.5	79	74	91	581	455	208	206	146	24	7.3	11
4	9.3	89	67	89	471	351	183	180	130	23	7.0	9.9
5	37	81	61	89	402	348	168	159	322	22	6.8	9.4
6	32	72	55	88	367	418	156	143	181	20	6.5	8.6
7	21	64	52	85	351	347	150	1960	141	18	6.5	16
8	18	58	49	80	319	303	176	11900	117	16	6.7	13
9	27	53	46	78	292	313	239	4030	111	15	6.5	9.8
10	3570	50	43	79	272	291	219	1210	117	18	6.3	8.0
11	675	48	41	77	238	251	184	729	97	43	6.2	7.2
12	463	45	82	72	217	232	163	4340	91	21	6.2	6.6
13	266	43	324	71	199	212	149	9630	256	30	7.8	6.4
14	179	41	260	70	182	196	301	1280	138	24	12	6.4
15	140	40	229	65	169	184	276	773	94	18	9.2	6.7
16	130	39	e1500	62	158	208	200	616	77	16	12	7.1
17	114	38	e2600	61	146	176	172	5290	66	14	11	7.7
18	100	37	1070	60	137	163	152	2190	59	13	9.7	7.9
19	88	37	633	64	143	350	145	890	54	12	24	8.3
20	80	37	474	64	193	852	425	636	49	12	45	9.8
21	73	39	393	63	197	530	1380	515	44	12	122	9.1
22	68	39	339	63	169	404	567	440	39	12	44	7.9
23	64	38	286	68	155	348	411	376	37	146	28	7.1
24	61	40	244	81	146	309	334	911	33	51	21	6.9
25	59	39	213	134	135	1660	274	604	32	24	55	6.3
26	55	38	191	138	126	852	253	420	36	17	95	6.0
27	52	36	174	125	116	557	391	350	35	13	52	5.7
28	49	35	161	115	109	460	396	306	33	11	32	5.7
29	47	37	147	108	---	399	303	280	29	10	23	6.1
30	45	41	130	735	---	346	261	259	25	9.2	18	5.9
31	43	---	115	3820	---	299	---	222	---	8.5	15	---
MEAN	213	47.6	328	226	322	393	291	1658	98.1	23.1	23.2	8.38
MAX	3570	89	2600	3820	2230	1660	1380	11900	322	146	122	16
MIN	9.3	35	41	60	109	110	145	143	25	8.5	6.2	5.7
IN.	0.89	0.19	1.37	0.94	1.22	1.64	1.18	6.93	0.40	0.10	0.10	0.03

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1969 - 2002, BY WATER YEAR (WY)

	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	154	353	327	269	346	527	516	416	224	92.5	40.6	153																						
MAX	1094	1408	1488	822	1496	1673	1978	1658	1252	450	154	2348																						
(WY)	1987	1986	1983	1991	1985	1973	1994	2002	1995	2000	1985	1993																						
MIN	8.88	9.94	8.94	10.8	42.5	43.4	26.8	23.5	15.9	4.16	2.72	1.70																						
(WY)	1979	1990	1990	1977	1981	1996	1981	2000	1988	1980	1980	1980																						

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1969 - 2002
ANNUAL MEAN	197	305	284
HIGHEST ANNUAL MEAN			554
LOWEST ANNUAL MEAN			85.6
HIGHEST DAILY MEAN	9160	Feb 24	11900
LOWEST DAILY MEAN	9.3	Oct 4	5.7
ANNUAL SEVEN-DAY MINIMUM	10	Sep 28	6.1
MAXIMUM PEAK FLOW	---		18900
MAXIMUM PEAK STAGE	---		20.96
INSTANTANEOUS LOW FLOW	---		5.2
ANNUAL RUNOFF (INCHES)	9.70		14.98
10 PERCENT EXCEEDS	362		472
50 PERCENT EXCEEDS	71		82
90 PERCENT EXCEEDS	20		9.2

e Estimated

06921070 POMME DE TERRE RIVER NEAR POLK, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1983 to February 1986, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 26...	1235	ENVIRONMENTAL	38	10.3	97	7.9	460	10.9	240	49.7	28.8	2.76		
JAN 09...	0855	ENVIRONMENTAL	78	14.3	104	7.9	332	.5	--	--	--	--		
MAR 13...	1245	ENVIRONMENTAL	212	13.8	125	8.4	386	9.4	--	--	--	--		
MAY 20...	1210	ENVIRONMENTAL	630	8.7	89	7.9	342	15.4	170	37.9	17.8	2.10		
JUL 22...	1115	ENVIRONMENTAL	12	5.3	69	7.8	405	26.9	--	--	--	--		
SEP 09...	1600	ENVIRONMENTAL	9.7	6.7	86	8.1	316	26.4	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 26...	5.87	221	223	272	0	13.8	<.1	9.8	<10	260	<.04	.18	<.05	
JAN 09...	--	196	195	237	0	--	--	--	<10	--	E.02	.15	1.10	
MAR 13...	--	168	169	197	5	--	--	--	<10	--	<.04	.24	.16	
MAY 20...	4.14	154	154	188	0	7.23	<.1	7.9	17	186	<.04	.27	.47	
JUL 22...	--	192	195	238	0	--	--	--	E12	--	<.04	.38	<.05	
SEP 09...	--	136	137	167	0	--	--	--	<10	--	<.04	.37	.06	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 26...	<.008	<.06	<.02	<.06	K10	K63	63	12	31	.4	<.04	<.1	<6	
JAN 09...	<.008	<.06	E.01	<.06	K14	22	29	--	--	--	--	--	--	
MAR 13...	<.008	<.06	<.02	<.06	K7	K5	K2	--	--	--	--	--	--	
MAY 20...	.084	E.05	<.02	.08	K180	500	420	46	182	<.2	<.04	<.1	E4	
JUL 22...	<.008	E.04	.02	E.05	K78	125	170	--	--	--	--	--	--	
SEP 09...	<.008	.06	.05	.06	29	125	64	--	--	--	--	--	--	

## OSAGE RIVER BASIN

06921070 POMME DE TERRE RIVER NEAR POLK, MO--Continued  
(Ambient Water-Quality Monitoring Network)

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 26...	36	E.06	<1	12.1	.01	<.3	--	4
JAN 09...	--	--	--	--	--	--	--	--
MAR 13...	--	--	--	--	--	--	--	--
MAY 20...	63	.18	M	14.0	<.01	E.2	--	3
JUL 22...	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06921200 LINDLEY CREEK NEAR POLK, MO

LOCATION.--Lat 37°45'02", long 93°15'58", in NE ¼ SE ¼ sec.29, T.35 N., R.21 W., Polk County, Hydrologic Unit 10290107, on left bank 30 ft upstream from county highway bridge, 0.5 mi downstream from Panther Creek, 2.5 mi northeast of Polk, and 11 mi upstream from Ingalls Creek.

DRAINAGE AREA.--112 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1957 to current year.

GAGE.--Water-stage recorder. Datum of gage is 884.08 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 25, 1957, nonrecording gage at site 30 ft downstream at same datum.

REMARKS.--Records fair except for discharges below 5 ft<sup>3</sup>/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.1	10	15	33	539	31	83	169	64	14	0.51	1.8
2	1.0	22	e17	29	259	189	77	113	56	14	0.36	1.0
3	0.96	51	15	26	201	143	68	90	51	20	0.33	0.85
4	1.0	29	14	24	156	131	61	75	47	26	0.23	0.54
5	46	21	13	25	134	151	57	63	178	21	0.24	0.38
6	58	19	13	26	127	206	53	55	82	17	0.16	0.30
7	16	16	12	24	129	133	53	1070	57	15	0.05	0.22
8	7.4	14	11	22	111	111	75	4930	48	13	0.00	0.17
9	6.9	12	9.9	24	100	175	73	1840	46	12	0.00	0.13
10	2070	11	9.4	25	88	126	58	390	52	11	0.05	0.11
11	527	11	9.0	22	76	105	51	245	45	12	0.20	0.08
12	423	10	215	20	73	93	47	4580	45	13	0.16	0.05
13	193	9.6	175	19	65	82	43	5960	2820	14	0.18	0.01
14	128	9.2	132	19	60	74	47	430	244	16	0.28	0.02
15	94	9.1	112	16	56	65	45	252	128	13	0.23	0.09
16	122	8.7	624	15	51	81	37	249	88	10	0.54	0.08
17	88	8.3	899	14	46	65	35	2560	66	8.6	3.0	0.08
18	71	8.2	318	14	42	60	32	546	52	7.6	3.5	0.05
19	57	8.8	209	18	53	265	41	270	42	6.7	3.3	0.07
20	47	8.1	156	18	82	330	122	192	34	16	15	0.11
21	39	7.9	132	18	65	170	247	145	29	12	12	0.07
22	33	7.6	120	21	50	128	119	117	26	8.8	9.5	0.02
23	29	7.4	101	30	47	116	90	99	23	88	10	0.00
24	26	11	88	45	44	106	76	1010	21	36	10	0.00
25	22	11	78	42	39	536	60	317	20	16	9.7	0.00
26	18	9.8	72	36	35	212	63	184	25	12	8.8	0.00
27	14	8.7	65	33	30	163	182	133	23	7.9	7.6	0.00
28	14	8.3	62	30	29	136	183	111	18	5.4	6.0	0.00
29	12	9.3	55	28	---	119	114	107	17	3.5	4.8	0.00
30	11	13	45	568	---	104	116	87	16	1.8	3.6	0.00
31	10	---	38	2260	---	93	---	74	---	0.92	2.7	---
MEAN	135	13.0	124	114	99.5	145	80.3	854	149	15.2	3.65	0.21
MAX	2070	51	899	2260	539	536	247	5960	2820	88	15	1.8
MIN	0.96	7.4	9.0	14	29	31	32	55	16	0.92	0.00	0.00
IN.	1.39	0.13	1.27	1.18	0.93	1.49	0.80	8.79	1.48	0.16	0.04	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1957 - 2002, BY WATER YEAR (WY)

MEAN	80.6	107	116	97.4	130	191	180	172	81.2	37.0	14.1	53.4
MAX	812	566	526	358	764	855	903	854	421	534	100	1134
(WY)	1987	1986	1983	1973	1985	1973	1994	2002	1985	1958	1958	1993
MIN	0.00	0.04	0.38	0.75	1.49	15.9	4.86	6.04	0.73	0.08	0.00	0.00
(WY)	1977	1964	1964	1964	1964	1996	1981	2000	1988	1980	1980	1960

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1957 - 2002	
ANNUAL MEAN	85.1		146		104	
HIGHEST ANNUAL MEAN					247	
LOWEST ANNUAL MEAN					18.8	
HIGHEST DAILY MEAN	4110		5960		12000	
LOWEST DAILY MEAN	0.37		0.00		0.00	
ANNUAL SEVEN-DAY MINIMUM	0.39		0.00		0.00	
MAXIMUM PEAK FLOW	---		24600		31900	
MAXIMUM PEAK STAGE	---		21.95		23.60	
INSTANTANEOUS LOW FLOW	---		0.00		0.00	
ANNUAL RUNOFF (INCHES)	10.32		17.66		12.68	
10 PERCENT EXCEEDS	164		196		184	
50 PERCENT EXCEEDS	26		31		25	
90 PERCENT EXCEEDS	1.3		0.29		0.48	

e Estimated

## OSAGE RIVER BASIN

06921325 POMME DE TERRE LAKE NEAR HERMITAGE, MO

LOCATION.--Lat 37°54'06", long 93°19'05", in NE ¼ sec.2, T.36 N., R.22 W., Hickory County, Hydrologic Unit 10290107, in intake tower at dam on Pomme de Terre River, 3.0 mi southwest of Hermitage.

DRAINAGE AREA.--611 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1960 to current year.

GAGE.--Water-stage recorder. Nonrecording gage prior to Nov. 9, 1961. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by earthfill embankment with a concrete gravity section-type dam. Closure operation began on June 28, 1960; conservation pool level reached June 15, 1963. Capacity at top of flood control pool, 648,700 ac-ft at elevation 874.0 ft, crest of spillway, of which 407,200 ac-ft between elevations 839.0 ft and 874.0 ft is used for flood control, and 228,700 ac-ft between elevation 783.0 ft and 839.0 ft is used for conservation and 12,840 ac-ft below elevation 783.0 ft is sediment storage. Lake is used for flood control and recreational purposes. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 506,000 ac-ft, Sept. 27, 1993, elevation, 864.58 ft; minimum, since initial filling to conservation pool level, 216,000 ac-ft, Mar. 3, 1964, elevation, 835.61 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 430,000 ac-ft, May 18, elevation 858.60 ft; minimum, 233,000 ac-ft, Sept. 30, elevation, 838.47 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	838.82	839.36	839.28	841.54	842.87	840.78	842.36	842.49	853.32	840.13	839.90	839.09
2	838.80	839.17	839.30	841.43	843.41	840.86	842.19	842.48	852.74	840.10	839.86	839.07
3	838.79	839.06	839.31	841.34	843.64	841.03	842.09	842.41	852.16	840.16	839.82	839.04
4	838.75	839.10	839.32	841.24	843.77	841.15	841.99	842.32	851.57	840.14	839.79	839.02
5	838.98	839.13	839.36	841.15	843.85	841.18	841.88	842.22	851.08	840.12	839.76	839.00
6	839.05	839.14	839.36	841.06	843.91	841.31	841.75	842.11	850.53	840.09	839.76	838.97
7	839.05	839.16	839.37	840.96	843.96	841.40	841.61	842.08	849.92	840.07	839.61	838.95
8	839.03	839.16	839.38	840.86	843.99	841.48	841.53	846.64	849.31	840.04	839.56	838.92
9	839.02	839.18	839.39	840.76	843.92	841.54	841.44	850.54	848.67	840.01	839.37	838.89
10	839.50	839.18	839.39	840.65	843.79	841.58	841.35	851.39	848.07	839.97	839.36	838.87
11	841.14	839.18	839.39	840.56	843.66	841.59	841.30	851.28	847.46	839.96	839.32	838.84
12	841.75	839.18	839.46	840.46	843.52	841.58	841.22	851.00	846.83	839.93	839.30	838.81
13	841.92	839.18	839.64	840.35	843.38	841.57	841.16	855.82	846.91	840.00	839.29	838.78
14	841.94	839.17	839.79	840.27	843.23	841.58	841.10	857.24	846.93	839.97	839.31	838.76
15	841.87	839.18	839.87	840.15	843.06	841.50	841.08	857.14	846.33	839.94	839.28	838.75
16	841.89	839.18	839.98	840.06	842.89	841.46	841.09	856.86	845.69	839.91	839.26	838.73
17	841.83	839.18	840.82	839.93	842.72	841.42	841.06	857.01	845.05	839.88	839.22	838.72
18	841.71	839.18	841.71	839.83	842.54	841.37	841.09	858.60	844.37	839.85	839.21	838.70
19	841.68	839.22	841.97	839.74	842.37	841.35	841.01	858.52	843.69	839.82	839.18	838.66
20	841.61	839.20	842.08	839.63	842.27	841.55	841.38	858.21	842.99	839.79	839.17	838.74
21	841.53	839.21	842.13	839.54	842.13	841.77	841.90	857.79	842.30	839.76	839.17	838.72
22	841.44	839.19	842.16	839.42	841.98	841.86	842.27	857.36	841.81	839.73	839.16	838.69
23	841.24	839.17	842.14	839.37	841.82	841.89	842.31	856.87	841.31	840.09	839.19	838.66
24	841.01	839.27	842.10	839.35	841.65	841.91	842.27	856.58	840.83	840.14	839.22	838.63
25	840.80	839.25	842.06	839.33	841.47	841.95	842.20	856.76	840.57	840.13	839.21	838.60
26	840.53	839.25	842.00	839.30	841.31	842.50	842.13	856.38	840.36	840.10	839.19	838.57
27	840.29	839.26	841.93	839.30	841.09	842.68	842.11	855.93	840.25	840.09	839.19	838.55
28	840.05	839.24	841.87	839.26	840.88	842.76	842.35	855.43	840.18	840.04	839.18	838.52
29	839.81	839.24	841.78	839.28	---	842.71	842.38	854.93	840.19	840.01	839.16	838.50
30	839.61	839.28	841.71	839.34	---	842.62	842.33	854.41	840.17	839.97	839.13	838.47
31	839.45	---	841.63	840.90	---	842.50	---	853.87	---	839.93	839.11	---
MAX	841.94	839.36	842.16	841.54	843.99	842.76	842.38	858.60	853.32	840.16	839.90	839.09
MIN	838.75	839.06	839.28	839.26	840.88	840.78	841.01	842.08	840.17	839.73	839.11	838.47
(-)	241000	240000	259000	253000	252000	266000	264000	376000	247000	245000	238000	233000
(=)	+5000	-1000	+19000	-6000	-1000	+14000	-2000	+112000	-129000	-2000	-7000	-5000

CAL YR 2001....+21000

WTR YR 2002....- 3000

(-) Contents, in acre-feet, at the end of the month.

(=) Change in contents, in acre-feet.



## 06921350 POMME DE TERRE RIVER NEAR HERMITAGE, MO

LOCATION.--Lat 37°54'20", long 93°19'45", in NW ¼ NW ¼ sec.2, T.36 N., R.22 W., Hickory County, Hydrologic Unit 10290107, on right bank 2,000 ft downstream from outlet of Pomme de Terre Lake, 2.5 mi southwest of Hermitage, 4.5 mi upstream from Green Branch, and at mile 43.4.

DRAINAGE AREA.--615 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1960 to current year.

GAGE.-- Water-stage recorder. Datum of gage is 749.33 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. Flow regulated by Pomme de Terre Lake (06921325), 0.5 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	43	949	52	484	423	375	999	752	3170	100	102	44
2	43	729	52	484	420	291	842	753	3160	102	102	44
3	52	51	52	483	421	290	715	752	3150	102	102	44
4	4.4	50	52	481	420	387	715	754	3140	101	102	44
5	5.3	50	52	481	420	485	715	755	3140	100	102	44
6	4.3	50	52	481	420	487	715	758	3130	100	348	44
7	4.0	50	52	480	420	486	715	844	3110	100	100	44
8	3.7	51	52	478	680	486	716	822	3100	100	100	44
9	13	51	52	478	919	489	717	1700	3090	101	583	44
10	19	51	52	478	919	487	572	2460	3080	102	44	44
11	7.2	51	52	478	919	487	490	2450	3070	101	43	44
12	191	51	67	478	919	487	492	2460	3070	104	44	44
13	498	51	168	478	919	487	493	2500	3100	102	44	44
14	496	51	252	478	918	487	494	2500	3070	101	44	45
15	390	52	252	478	917	487	389	2490	3060	100	43	45
16	493	52	252	477	916	487	296	2480	3050	100	43	45
17	491	52	385	476	915	487	299	2500	3040	100	44	45
18	490	52	484	475	915	487	301	2660	3020	100	44	45
19	490	53	486	475	915	489	308	3030	3020	100	44	46
20	490	53	484	475	915	490	336	3250	3000	100	44	45
21	490	52	484	475	915	492	312	3300	2410	100	44	45
22	736	52	485	357	913	491	542	3280	2050	102	44	45
23	1000	52	486	247	912	490	744	3270	1960	109	44	45
24	1000	52	485	248	911	491	745	3290	1330	102	44	45
25	1000	52	484	248	912	493	744	3260	1060	102	44	45
26	998	52	484	247	914	496	746	3250	650	102	44	45
27	994	52	484	247	911	496	763	3230	286	102	44	45
28	991	52	484	157	752	763	752	3220	205	102	44	45
29	943	52	484	82	---	999	750	3210	101	102	44	45
30	645	52	484	92	---	999	750	3200	100	102	44	45
31	419	---	484	206	---	999	---	3180	---	102	44	---
MEAN	434	104	282	393	778	527	606	2334	2397	101	84.1	44.6
MAX	1000	949	486	484	919	999	999	3300	3170	109	583	46
MIN	3.7	50	52	82	420	290	296	752	100	100	43	44
IN.	0.81	0.19	0.53	0.74	1.32	0.99	1.10	4.38	4.35	0.19	0.16	0.08

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002, BY WATER YEAR (WY)

	MEAN	328	547	624	503	578	869	849	907	641	356	119	132
MAX	3116	2872	2886	2042	2100	3487	2948	4799	2397	2349	480	1110	
(WY)	1994	1987	1986	1993	1975	1985	1984	1961	2002	1995	1978	1993	
MIN	13.1	7.50	20.5	20.4	21.5	24.6	26.8	26.4	31.9	26.0	18.6	1.27	
(WY)	1969	1977	1963	1962	1963	1963	1963	1963	1969	1970	1961	1960	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1960 - 2002	
ANNUAL MEAN	424		672		538	
HIGHEST ANNUAL MEAN					1163	
LOWEST ANNUAL MEAN					67.8	
HIGHEST DAILY MEAN	1980	Feb 28	3300	May 21	9000	May 9 1961
LOWEST DAILY MEAN	3.7	Oct 8	3.7	Oct 8	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	7.7	Oct 4	7.7	Oct 4	0.00	At Times
MAXIMUM PEAK FLOW	---		3430	May 24	9000	May 9 1961
MAXIMUM PEAK STAGE	---		9.00	May 24	15.02	May 9 1961
INSTANTANEOUS LOW FLOW	---		3.5	Oct 9	0.00	Several Years
ANNUAL RUNOFF (INCHES)	9.37		14.83		11.88	
10 PERCENT EXCEEDS	987		2500		1940	
50 PERCENT EXCEEDS	108		475		104	
90 PERCENT EXCEEDS	41		44		44	

## OSAGE RIVER BASIN

06921582 SOUTH GRAND RIVER BELOW FREEMAN, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 38°35'20", long 94°26'30", in NW ¼ NW ¼ NE ¼ sec.27, T.44N., R.32 W., Cass County, Hydrologic Unit 10290108, access is on the left bank on upstream side of bridge on gravel road, approximately 2 mi south of State Highway 2, approximately 6.1 mi southwest of Harrisonville, and 4 mi southeast of Freeman.

DRAINAGE AREA.--150 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1997 to current year. October 1998 to September 2000 published as South Grand River at Grand River Church (06921881).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 17...	1345	ENVIRONMENTAL	46	9.1	84	8.1	810	10.5	--	--	--	--
NOV 13...	1100	ENVIRONMENTAL	3.7	6.0	56	7.9	723	11.0	290	95.0	12.8	6.06
DEC 18...	1135	ENVIRONMENTAL	4.9	10.3	84	8.2	835	5.5	--	--	--	--
JAN 23...	1210	ENVIRONMENTAL	3.8	14.7	116	8.3	659	4.0	250	81.0	11.2	5.19
23...	1245	BLANK	--	--	--	--	--	--	--	.04	<.008	<.10
FEB 20...	1155	ENVIRONMENTAL	125	9.4	84	8.3	460	9.0	--	--	--	--
MAR 04...	1220	ENVIRONMENTAL	22	14.5	105	8.3	526	1.0	--	--	--	--
APR 23...	1200	ENVIRONMENTAL	120	7.6	80	8.1	413	16.5	--	--	--	--
MAY 15...	1135	ENVIRONMENTAL	239	9.3	100	8.1	436	17.5	200	68.5	7.15	3.38
JUN 11...	1135	ENVIRONMENTAL	19	6.8	85	8.1	543	24.5	--	--	--	--
JUL 10...	1155	ENVIRONMENTAL	1.6	6.0	83	8.1	734	30.5	250	82.6	11.5	4.10
AUG 13...	1240	ENVIRONMENTAL	8.2	5.2	64	8.2	785	24.0	--	--	--	--
SEP 25...	1230	ENVIRONMENTAL	.62	7.6	85	8.0	1080	19.5	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 17...	--	196	196	239	0	--	--	--	61	--	<.04	.71	.60
NOV 13...	41.5	257	259	316	0	24.1	.3	102	16	460	<.04	.59	E.03
DEC 18...	--	234	234	286	0	--	--	--	20	--	<.04	.43	.72
JAN 23...	45.5	200	199	243	0	33.5	.3	94.7	12	408	<.04	.51	1.79
23...	<.09	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05
FEB 20...	--	177	177	216	0	--	--	--	82	--	<.04	.93	.43
MAR 04...	--	209	210	257	0	--	--	--	<10	--	<.04	.33	.61
APR 23...	--	162	164	200	0	--	--	--	160	--	.08	1.3	.70
MAY 15...	10.8	177	174	213	0	8.26	.2	34.8	108	275	<.04	.82	.85
JUN 11...	--	218	220	269	0	--	--	--	40	--	<.04	.45	.53
JUL 10...	48.6	223	222	271	0	23.2	.3	119	40	457	<.04	.64	<.05
AUG 13...	--	173	172	210	0	--	--	--	41	--	E.02	.80	.10
SEP 25...	--	186	181	221	0	--	--	--	23	--	<.04	.98	.07

06921582 SOUTH GRAND RIVER BELOW FREEMAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 17...	.008	.11	.11	.23	K450	1400	1600	--	--	--	--	--	--
NOV 13...	<.008	.07	.06	.15	23	50	100	3	463	1.9	E.02	<.1	<6
DEC 18...	E.007	.08	.04	.11	120	82	230	--	--	--	--	--	--
JAN 23...	.010	.15	.14	.21	K12	K11	98	5	199	1.7	.05	<.1	<6
23...	<.008	<.06	<.02	<.06	--	--	--	4	4	<.2	<.04	<.1	<6
FEB 20...	.009	.07	.04	.19	720	320	810	--	--	--	--	--	--
MAR 04...	E.005	E.04	.03	.08	K3	K2	27	--	--	--	--	--	--
APR 23...	.028	.08	.06	.24	850	K2400	K2800	--	--	--	--	--	--
MAY 15...	.032	E.04	.02	.20	1000	470	800	2	1300	1.3	<.04	E.1	<6
JUN 11...	.009	E.04	.04	.10	K11	93	160	--	--	--	--	--	--
JUL 10...	<.008	E.05	.04	.11	K60	42	100	2	430	2.4	.04	E.1	<6
AUG 13...	<.008	.07	.05	.16	1400	620	2000	--	--	--	--	--	--
SEP 25...	E.004	E.05	.03	.09	K20	67	130	--	--	--	--	--	--

[illegible]

## OSAGE RIVER BASIN

06921582 SOUTH GRAND RIVER BELOW FREEMAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

06921582 SOUTH GRAND RIVER BELOW FREEMAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 13...	<.002	<.010	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
DEC 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 04...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.05	<.034	<.02
APR 23...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
MAY 15...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.031	<.02	<.034	<.02
JUN 11...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.025	<.02	<.034	<.02
JUL 10...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	.006	<.02	<.034	<.02
AUG 13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 25...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 17...	--	--	--
NOV 13...	<.005	<.002	<.009
DEC 18...	--	--	--
JAN 23...	--	--	--
23...	--	--	--
FEB 20...	--	--	--
MAR 04...	<.005	<.002	<.009
APR 23...	<.005	<.002	<.009
MAY 15...	<.005	<.002	<.009
JUN 11...	<.005	<.002	<.009
JUL 10...	<.005	<.002	<.009
AUG 13...	--	--	--
SEP 25...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

06921760 SOUTH GRAND RIVER NEAR CLINTON, MO

LOCATION.--Lat 38°22'16", long 93°51'23", in NW ¼ SW ¼ SE ¼ sec.1, T.41 N., R.27 W., Henry County, Hydrologic Unit 10290108, at right upstream end of bridge on State Highway 18, 4.4 mi west of Clinton, and 5.4 mi downstream from Big Creek.

DRAINAGE AREA.--1,270 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1986 to current year.

GAGE.--Water-stage recorder. Datum of gage is 700.00 ft above National Geodetic Vertical Datum of 1929. Auxiliary water-stage recorder 3.3 mi upstream from base gage at same datum.

REMARKS.--Discharge is calculated using fall computations due to backwater from Harry S. Truman Reservoir. Records poor. U.S. Army Corps of Engineers satellite telemeter at base and auxiliary gage.

EXTREMES FOR CURRENT YEAR.--Maximum daily discharge, 28,400 ft<sup>3</sup>/s, May 10; minimum 13 ft<sup>3</sup>/s, Sept. 24.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	77	50	30	46	950	159	85	1260	e1130	105	40	23
2	73	46	31	42	1780	151	70	859	e920	101	38	22
3	73	49	32	40	1150	151	61	626	e760	102	39	21
4	72	50	33	36	847	151	58	465	e760	104	40	22
5	422	48	38	34	650	141	53	361	e1400	101	40	21
6	2930	45	36	38	489	146	59	300	e2150	105	40	19
7	1840	41	40	40	390	171	69	1410	e1510	111	41	18
8	774	37	37	44	307	203	69	7300	e891	107	40	17
9	490	31	42	40	257	209	72	20800	e676	98	39	17
10	378	36	42	39	200	220	93	28400	e529	95	e36	15
11	444	36	40	38	184	224	122	21300	e408	85	e35	15
12	356	36	40	37	144	209	144	14000	656	88	e34	14
13	253	36	38	49	129	190	500	e8510	2270	126	e34	14
14	199	35	46	46	114	182	446	e6270	2970	168	e32	15
15	194	34	60	46	113	166	280	e4180	1750	135	e32	16
16	313	34	65	48	110	154	209	e2360	1210	115	e30	16
17	605	32	69	45	120	142	161	e3220	917	97	30	16
18	538	34	73	44	114	132	135	e4930	750	87	29	14
19	376	33	70	42	122	128	122	e3380	607	78	30	18
20	268	26	74	45	218	121	139	e2150	498	74	28	16
21	213	33	90	42	551	112	283	e1400	418	95	33	e15
22	170	34	80	46	614	104	1100	e1130	348	106	37	e15
23	143	33	68	57	465	99	1110	e973	303	85	35	e14
24	113	34	58	75	360	95	696	e1190	263	73	37	e13
25	92	29	64	73	279	97	478	e4180	230	65	31	15
26	82	34	63	61	224	90	356	e6530	191	56	25	15
27	65	27	58	50	198	88	621	e7820	151	49	21	14
28	69	27	58	52	174	83	3360	e4230	132	43	21	14
29	63	29	56	54	---	80	4440	e3060	107	43	21	16
30	56	30	52	71	---	79	2420	e1780	112	42	22	17
31	54	---	50	764	---	80	---	e1240	---	42	23	---
MEAN	380	36.0	52.7	70.4	402	140	594	5342	834	89.7	32.7	16.6
MAX	2930	50	90	764	1780	224	4440	28400	2970	168	41	23
MIN	54	26	30	34	110	79	53	300	107	42	21	13
IN.	0.35	0.03	0.05	0.06	0.33	0.13	0.52	4.85	0.73	0.08	0.03	0.01

e Estimated

## 06922440 HARRY S. TRUMAN RESERVOIR AT WARSAW, MO

LOCATION.-- Lat 38°15'30", long 93°23'40", in NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec.7, T.40 N., R.22 W., Benton County, Hydrologic Unit 10290105, in control room near middle of dam on Osage River, 1.5 mi northwest of Warsaw, and at mile 175.

DRAINAGE AREA.--11,500 mi<sup>2</sup>, with 7,856 mi<sup>2</sup> uncontrolled area below other reservoirs.

PERIOD OF RECORD.--October 1981 to current year. Records collected at same site since 1977 available from U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by a rolled earthfill type dam. Storage began on July 21, 1977. Spillway is equipped with 4 tainter gates 40 ft wide by 47.3 ft high. Capacity of surcharge pool 2,911,000 ac-ft (elevation 739.6 ft to 751.1 ft); of flood control pool 4,006,000 ac-ft (elevation 706.0 ft to 739.6 ft); and of multipurpose pool 1,203,000 ac-ft (elevation 635.0 ft to 706.0). Lake is used for flood control, power, recreation, and fish and wildlife enhancement. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 5,020,000 ac-ft, Oct. 11, 12, 1986, elevation, 738.69 ft, Oct. 11, 1986; minimum, 41,700 ac-ft, Nov. 14, 1978, elevation, 661.0 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 2,740,000 ac-ft, May 18, elevation, 724.41 ft; minimum, 1,130,000 ac-ft, Sept. 10, elevation, 704.99 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	706.46	705.83	706.24	706.55	708.63	707.01	705.58	709.04	721.30	707.76	705.78	705.60
2	706.47	705.94	706.31	706.47	708.92	707.23	705.52	708.86	720.96	707.78	705.77	705.58
3	706.49	706.00	706.38	706.36	708.93	707.27	705.45	708.55	720.50	707.08	705.82	705.32
4	706.67	706.02	706.42	706.32	708.66	707.19	705.41	708.15	719.91	707.04	705.84	705.18
5	707.16	705.93	706.46	706.34	708.41	707.12	705.47	707.71	719.18	707.12	705.83	705.02
6	707.46	705.89	706.51	706.38	708.12	707.10	705.52	707.28	718.31	707.17	705.88	705.03
7	707.65	705.85	706.58	706.33	707.77	707.24	705.55	708.82	717.45	707.13	705.88	705.08
8	707.51	705.80	706.64	706.27	707.46	707.38	705.61	711.90	716.56	706.92	705.92	705.08
9	707.41	705.81	706.68	706.30	707.40	707.39	705.66	714.50	716.06	706.71	705.98	705.02
10	708.40	705.82	706.52	706.34	707.15	707.44	705.72	716.53	715.63	707.20	706.02	704.99
11	708.46	705.81	706.40	706.39	706.90	707.48	705.79	717.82	715.26	707.18	706.00	705.03
12	708.25	705.83	706.38	706.42	706.87	707.37	705.86	718.94	715.32	707.27	705.98	705.04
13	708.35	705.84	706.41	706.47	706.85	707.38	705.95	720.48	715.77	707.41	706.02	705.06
14	708.40	705.86	706.55	706.53	707.00	707.37	706.00	721.75	715.62	707.39	706.03	705.12
15	708.13	705.87	706.63	706.56	707.07	707.44	706.09	722.64	715.51	707.25	705.98	705.12
16	707.60	705.88	706.73	706.62	707.13	707.48	706.12	723.30	715.29	707.12	706.02	705.11
17	707.35	705.89	706.80	706.60	707.20	707.48	705.92	723.97	714.89	706.93	706.01	705.13
18	707.26	705.98	706.98	706.51	707.22	707.48	705.98	724.41	714.34	706.73	706.00	705.17
19	707.15	705.97	706.90	706.56	707.29	707.40	706.18	724.38	713.78	706.56	706.02	705.30
20	707.16	705.98	706.87	706.61	707.28	707.10	706.64	724.03	713.17	706.52	706.02	705.28
21	707.19	705.98	706.88	706.63	707.36	706.90	707.21	723.50	712.54	706.44	705.96	705.27
22	707.04	705.98	706.95	706.60	707.42	706.67	707.45	722.88	711.89	706.23	705.76	705.26
23	706.79	705.98	707.01	706.64	707.57	706.58	707.68	722.22	711.22	706.25	705.49	705.24
24	706.49	706.16	707.03	706.62	707.64	706.39	707.68	722.38	710.60	706.22	705.53	705.20
25	706.21	706.06	707.06	706.52	707.57	706.33	707.58	722.27	709.88	706.11	705.53	705.20
26	705.91	706.15	706.93	706.49	707.40	706.22	707.26	722.09	709.13	705.91	705.45	705.20
27	705.90	706.10	706.86	706.53	707.21	706.07	708.14	721.97	708.53	705.93	705.49	705.20
28	705.92	706.11	706.87	706.55	706.98	705.97	708.85	721.80	707.94	705.93	705.53	705.19
29	705.81	706.17	706.84	706.59	---	705.88	709.18	721.70	707.96	705.90	705.55	705.18
30	705.81	706.22	706.76	706.82	---	705.77	709.13	721.64	707.88	705.91	705.58	705.17
31	705.81	---	706.64	708.12	---	705.68	---	721.50	---	705.86	705.61	---
MAX	708.46	706.22	707.06	708.12	708.93	707.48	709.18	724.41	721.30	707.78	706.03	705.60
MIN	705.81	705.80	706.24	706.27	706.85	705.68	705.41	707.28	707.88	705.86	705.45	704.99
(-)	1170000	1190000	1220000	1310000	1180000	1160000	1370000	2420000	1290000	1170000	1160000	1140000
(=)	-30000	+20000	+30000	+90000	-130000	-20000	+210000	+1050000	-1130000	-120000	-10000	-20000

CAL YR 2001....+116000

WTR YR 2002....- 60000

(-) Contents, in acre-feet, at the end of the month.

(=) Change in contents, in acre-feet.

## OSAGE RIVER BASIN

06922450 OSAGE RIVER BELOW HARRY S. TRUMAN DAM AT WARSAW, MO

LOCATION.--Lat 38°15'41", long 93°24'16", NE ¼ SW ¼ sec.17, T.40 N., R.22 W., Benton County, Hydrologic Unit 10290109, on right bank 2,000 ft below Harry S Truman Dam, 1.5 mi northwest of Warsaw.

DRAINAGE AREA.--11,500 mi<sup>2</sup>, with 7,856 mi<sup>2</sup> uncontrolled area below other reservoirs.

PERIOD OF RECORD.--May 1978 to current year.

GAGE.--Acoustic flow monitor. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers).

REMARKS.--Records not published prior to 1982 water year due to test period of acoustic flow monitor which included periods of unreliable record. Flow completely regulated by Harry S. Truman Dam (06922440), 2,000 ft upstream. U.S. Army Corps of Engineers satellite telemeter at station.

COOPERATION.--Records were provided by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0	100	0	2540	7540	3990	3350	20600	41300	4470	3370	300
2	0	0	0	3680	7490	0	3680	17200	41600	3330	2300	300
3	0	0	0	3650	9750	0	2800	17500	41800	3550	500	6620
4	0	0	0	2170	14200	4680	2800	17400	42200	4790	500	4340
5	1010	3390	0	0	12600	5270	1570	17900	45700	500	1620	5490
6	0	1490	0	0	12800	4730	833	18300	52500	500	500	1040
7	0	1460	0	2920	13700	0	833	0	51900	1870	500	300
8	6930	1400	0	2190	12400	1360	1640	0	51800	7860	500	300
9	2790	0	0	0	6850	4380	833	0	39800	9100	500	1650
10	0	0	5750	0	8270	1800	729	0	34000	8940	500	288
11	7250	0	5070	0	9650	2690	680	6430	31900	4480	500	200
12	13000	0	4890	0	3280	6500	680	10400	27000	4160	500	225
13	0	0	717	0	3780	1090	680	0	26000	500	1240	133
14	0	0	0	0	0	4330	680	181	29800	1410	500	200
15	11900	0	0	0	1010	0	550	300	30000	5150	1780	200
16	17700	0	0	0	2030	0	3810	7200	30400	6630	500	133
17	8760	0	0	2050	0	2980	8110	12900	34100	7720	500	200
18	4520	0	0	3560	1990	2140	2030	12800	34600	8100	500	83
19	5300	0	6120	0	2020	4790	383	26100	33500	7750	383	0
20	988	0	2170	0	4150	10300	383	37100	32700	4040	1500	83
21	667	0	1450	0	2650	8730	383	46900	32800	4400	3900	200
22	6890	0	0	2490	3300	7590	2120	51600	31600	8750	6610	200
23	7570	0	0	0	0	4640	3570	52300	31900	1110	9380	200
24	9920	0	0	2140	2420	6060	10100	36400	29000	3090	300	146
25	8470	0	0	3180	6950	4420	9460	36300	30000	4650	300	100
26	8670	0	2550	1760	7200	4130	13600	43600	28000	7420	1950	33
27	617	0	2930	0	9650	5200	8560	44900	21500	500	300	0
28	647	0	0	0	8300	4350	8460	45100	21600	500	300	0
29	4300	0	2420	0	---	4800	11700	41800	2330	500	300	0
30	729	0	2880	4220	---	4190	24900	40200	2800	1650	300	67
31	721	---	4370	3420	---	4080	---	41000	---	2580	300	---
MEAN	4173	261	1333	1289	6214	3846	4330	22660	32800	4194	1375	768
MAX	17700	3390	6120	4220	14200	10300	24900	52300	52500	9100	9380	6620
MIN	0	0	0	0	0	0	383	0	2330	500	300	0

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1982 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	9333	10050	11790	7623	8549	13400	13900	16810	17350	9189	5232	3403
MAX	52090	42250	43020	32520	20050	44920	32720	48830	48240	43150	28320	18300
(WY)	1987	1987	1993	1993	1982	1985	1984	1994	1995	1995	1993	1993
MIN	0.00	23.8	83.6	431	933	864	253	966	585	551	367	135
(WY)	1996	1996	1996	2001	1996	1996	1996	2000	1988	1991	1991	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1982 - 2002 <sup>a</sup>	
ANNUAL MEAN	6813		6914		10810	
HIGHEST ANNUAL MEAN					18760	
LOWEST ANNUAL MEAN					2516	
HIGHEST DAILY MEAN	50600		Jun 13		71100	
LOWEST DAILY MEAN	0		Many Days		0	
			Jun 6		Oct 20	
			Many Days		Many Years	

<sup>a</sup> Post-regulation period.



06923700 NIANGUA RIVER BELOW BENNETT SPRINGS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°44'17", long 92°51'37", in NE ¼ SE ¼ SE ¼ sec.25, T.35 N., R.18 W., Dallas County, Hydrologic Unit 10290110, at bridge on Highway 64, 1,200 ft downstream from inflow of Bennett Spring Branch.

PERIOD OF RECORD.--October 1983 to September 1988, July 1991 to current year.

REMARKS.--Ambient Water-Quality Monitoring Network station October 1983 to September 1988, November 1993 to current year.  
Special project station July 1991 to October 1995.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	OXYGEN, DIS-SOLVED	OXYGEN, (per-cent satur-ation)	pH WATER WHOLE FIELD (stand-ard units)	SPE-CIFIC CON-DUCT-ANCE	TEMPER-ATURE WATER	HARD-NESS TOTAL	CALCIUM DIS-SOLVED	MAGNE-SIUM, DIS-SOLVED	POTAS-SIUM, DIS-SOLVED	
			(cubic feet per second) (00061)	(mg/L) (00300)	(00301)	(00400)	(µS/cm) (00095)	(deg C) (00010)	(mg/L as CaCO <sub>3</sub> ) (00900)	(mg/L as Ca) (00915)	(mg/L as Mg) (00925)	(mg/L as K) (00935)	
NOV 01...	1055	ENVIRONMENTAL	147	9.6	98	7.8	375	14.5	200	40.8	23.5	.75	
JAN 22...	1035	ENVIRONMENTAL	171	11.3	100	7.1	348	8.7	--	--	--	--	
MAR 18...	1045	ENVIRONMENTAL	376	12.3	115	8.1	352	11.3	--	--	--	--	
MAY 21...	1115	ENVIRONMENTAL	1160	9.8	98	7.7	229	14.6	120	25.7	13.6	.46	
21...	1116	REPLICATE	--	--	--	--	--	--	--	--	--	--	
JUL 29...	1110	ENVIRONMENTAL	165	8.3	89	7.4	381	17.4	--	--	--	--	
SEP 09...	1400	ENVIRONMENTAL	140	12.8	139	7.9	394	18.1	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 01...	4.03	185	186	227	0	5.87	<.1	5.5	<10	202	<.04	.14	.77
JAN 22...	--	163	164	200	0	--	--	--	<10	--	<.04	.14	.91
MAR 18...	--	193	193	235	0	--	--	--	<10	--	<.04	.14	.67
MAY 21...	4.84	107	106	130	0	5.62	<.1	5.5	18	130	E.02	.22	1.07
21...	--	--	--	--	--	--	--	--	--	--	<.04	.21	.87
JUL 29...	--	182	183	223	0	--	--	--	<10	--	<.04	.12	.92
SEP 09...	--	201	203	248	0	--	--	--	<10	--	E.02	E.09	.89
DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 01...	E.006	<.06	<.02	E.03	K2	40	31	22	44	.2	<.04	<.1	<6
JAN 22...	E.004	<.06	<.02	E.03	330	K4	K8	--	--	--	--	--	--
MAR 18...	<.008	<.06	<.02	<.06	K1	K1	K6	--	--	--	--	--	--
MAY 21...	.016	E.04	E.01	E.04	120	220	372	123	228	.2	<.04	<.1	<6
21...	.063	E.04	<.02	E.04	650	237	334	--	--	--	--	--	--
JUL 29...	.008	<.06	E.01	E.04	20	21	38	--	--	--	--	--	--
SEP 09...	.009	E.03	E.02	<.06	K5	28	23	--	--	--	--	--	--

## OSAGE RIVER BASIN

06923700 NIANGUA RIVER BELOW BENNETT SPRINGS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 01...	20	E.06	<1	10.2	<.01	<.3	--	11
JAN 22...	--	--	--	--	--	--	--	--
MAR 18...	--	--	--	--	--	--	--	--
MAY 21...	77	.20	M	9.3	<.01	<.3	--	3
21...	--	--	--	--	--	--	--	--
JUL 29...	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06923950 NIANGUA RIVER AT TUNNEL DAM NEAR MACKS CREEK, MO

LOCATION.--Lat 37°56'14", long 92°51'03", in SE ¼ SW ¼ SW ¼ sec.19, T.37 N., R.17 W., Camden County, Hydrologic Unit 10290110, at left end of concrete structure on top of Tunnel Dam, 6.5 mi southeast of Macks Creek.

DRAINAGE AREA.--598 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1995 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good. Diversion upstream through tunnel for power generation. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	145	149	226	169	6500	170	192	453	285	105	221	184
2	146	249	229	148	4130	215	234	455	233	122	218	182
3	147	267	227	138	1820	296	157	367	247	124	216	175
4	150	258	223	132	1200	422	151	299	266	145	212	175
5	232	182	229	125	753	339	127	249	315	150	211	169
6	260	161	230	124	692	324	159	209	322	140	213	161
7	233	172	226	180	612	341	167	881	275	125	221	161
8	214	177	223	194	529	319	181	8860	228	109	219	160
9	196	182	220	181	454	294	176	10900	191	96	212	156
10	1150	222	215	252	411	313	150	6530	168	90	208	159
11	3350	217	213	197	368	293	153	2570	154	95	238	152
12	745	213	252	145	318	227	127	3030	209	127	242	150
13	369	209	328	239	274	232	242	10700	998	105	242	147
14	230	206	381	237	243	202	408	12000	2110	84	237	162
15	179	202	378	232	239	169	291	3380	670	87	218	162
16	172	199	502	228	210	146	299	2110	395	263	241	158
17	147	195	2390	226	183	136	259	3970	280	278	235	159
18	150	193	4080	222	192	145	220	6720	207	277	226	159
19	145	195	1640	226	232	215	256	3730	169	248	222	162
20	125	191	959	223	229	386	1090	1950	160	246	236	173
21	103	189	649	220	229	539	932	1030	127	243	234	166
22	110	188	501	220	231	290	1290	607	121	251	218	155
23	118	193	416	219	216	196	941	462	126	400	268	147
24	109	209	340	226	200	212	687	923	134	292	276	142
25	99	190	292	239	184	259	377	1940	149	256	254	138
26	220	196	240	252	175	1090	312	939	136	239	230	136
27	241	196	198	280	167	699	415	598	160	229	223	137
28	229	199	176	290	174	375	489	448	155	222	214	137
29	165	208	140	287	---	370	488	336	128	214	205	135
30	150	218	113	349	---	273	420	352	113	218	198	141
31	156	---	159	2800	---	180	---	404	---	225	189	---
MEAN	328	201	535	297	756	312	380	2819	308	187	226	157
MAX	3350	267	4080	2800	6500	1090	1290	12000	2110	400	276	184
MIN	99	149	113	124	167	136	127	209	113	84	189	135
IN.	0.63	0.37	1.03	0.57	1.32	0.60	0.71	5.44	0.57	0.36	0.44	0.29

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1995 - 2002, BY WATER YEAR (WY)

	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	226	346	262	180	482	523	600	898
MAX	492	1345	535	317	845	1458	1696	2819
(WY)	1999	1997	2002	1999	2001	1998	1999	2002
MIN	59.8	66.8	130	56.9	39.2	47.9	106	28.1
(WY)	1998	1998	1998	1997	1996	1996	2000	1997

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1995 - 2002

	2001	2002	1995-2002
ANNUAL MEAN	310	544	361
HIGHEST ANNUAL MEAN			555
LOWEST ANNUAL MEAN			143
HIGHEST DAILY MEAN	8720	Feb 25	14500
LOWEST DAILY MEAN	97	Jul 21	0.00
ANNUAL SEVEN-DAY MINIMUM	116	Oct 19	8.1
MAXIMUM PEAK FLOW	---	13400 <sup>a</sup>	15200 <sup>a</sup>
MAXIMUM PEAK STAGE	---	13.55	14.19
INSTANTANEOUS LOW FLOW	---	71	0.00
ANNUAL RUNOFF (INCHES)	7.05	12.34	8.20
10 PERCENT EXCEEDS	348	804	597
50 PERCENT EXCEEDS	182	222	159
90 PERCENT EXCEEDS	132	138	46

<sup>a</sup> From rating extended above 10,500 ft<sup>3</sup>/s.

## OSAGE RIVER BASIN

06925500 LAKE OF THE OZARKS NEAR BAGNELL, MO

LOCATION.--Lat 38°12'19", long 92°37'21", in SE ¼ sec.19, T.40 N., R.15 W., Miller County, Hydrologic Unit 10290111, at left end of powerhouse section near left end of Bagnell Dam on Osage River, 2 mi southwest of Bagnell, and at mile 81.7.

DRAINAGE AREA.--14,000 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1931 to current year. Gage-height records collected at same site since 1932 are in reports of the National Weather Service, published as "Osage River at Bagnell Dam, Lakeside".

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum, adjustment of 1912. To obtain National Geodetic Vertical Datum of 1929, subtract 0.88 ft.

REMARKS.--Lake is formed by concrete gravity dam. Spillway is equipped with 12 tainter gates 34 ft wide by 22 ft high. Storage began in 1931. Usable capacity 1,218,000 ac-ft between elevation 630.00 ft (maximum draw-down) and 660.00 ft (top of gates). Dead storage, 708,800 ac-ft. Figures given herein are usable contents. Lake is used for flood control, power, and recreational purposes.

COOPERATION.--Records were provided by the Ameren UE of Missouri.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 1,527,000 ac-ft, May 22, 1943, elevation, 665.45 ft; minimum, 322,100 ac-ft, Feb. 13, 1948, elevation, 639.95 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 1,222,000 ac-ft, May 9, elevation, 660.08 ft; minimum, 890,000 ac-ft, Mar. 5, elevation, 653.87 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	657.91	658.70	658.54	659.80	657.57	654.20	656.45	658.80	659.02	659.5	658.76	658.11
2	657.87	658.79	658.54	659.68	657.49	654.32	656.38	658.25	659.12	659.58	658.74	658.10
3	657.83	658.79	658.41	659.64	657.27	654.25	656.25	658.01	659.12	659.76	658.72	658.32
4	657.95	658.79	658.41	659.25	657.12	654.00	656.10	658.53	659.10	659.74	658.68	658.45
5	658.09	658.80	658.41	659.06	656.96	653.87	656.00	659.05	659.12	659.69	658.70	658.45
6	658.08	658.67	658.42	658.90	656.95	654.00	656.04	659.15	659.37	659.66	658.73	658.30
7	658.07	658.68	658.43	658.68	656.96	654.06	656.12	659.04	659.55	659.71	658.71	658.13
8	658.33	658.73	658.43	658.50	656.86	654.20	656.08	659.95	659.72	659.58	658.70	658.10
9	658.25	658.72	658.43	658.16	657.13	654.38	656.18	660.08	659.50	659.36	658.67	657.83
10	658.02	658.70	658.64	658.17	657.35	654.48	656.04	659.39	659.39	659.28	658.62	657.41
11	657.95	658.70	658.87	658.18	657.35	654.50	655.89	658.51	659.40	659.43	658.57	657.37
12	657.84	658.60	659.15	658.18	657.01	654.72	655.77	658.40	659.40	659.68	658.55	657.33
13	657.91	658.56	659.19	658.18	656.75	654.84	655.80	658.89	659.32	659.69	658.42	657.30
14	657.96	658.51	659.21	658.18	656.30	655.05	655.79	658.45	659.39	659.71	658.42	657.32
15	658.00	658.51	659.23	658.18	655.90	655.14	655.69	657.51	659.39	659.38	658.46	657.33
16	658.00	658.51	659.45	658.18	655.96	655.12	655.80	656.80	659.29	659.50	658.40	657.28
17	657.83	658.51	659.48	658.25	655.95	655.28	656.00	656.95	659.24	659.55	658.39	657.27
18	657.40	658.52	659.61	658.29	655.67	655.10	656.10	656.85	659.25	659.58	658.41	657.19
19	657.14	658.53	659.60	658.30	655.45	655.20	656.25	656.70	659.23	659.50	658.25	657.15
20	657.25	658.53	659.34	658.30	655.22	655.60	657.25	656.94	659.20	659.50	658.22	657.12
21	657.32	658.53	659.30	658.07	654.85	655.60	657.77	657.39	659.14	659.62	658.12	657.10
22	657.60	658.52	659.35	658.06	654.55	655.55	657.90	658.02	659.05	659.56	658.10	657.07
23	658.00	658.53	659.40	658.00	654.54	655.75	657.97	658.40	659.00	659.38	658.50	657.04
24	658.40	658.57	659.43	657.90	654.62	655.90	658.33	658.84	659.00	659.43	658.50	656.98
25	658.72	658.56	659.44	657.85	654.71	655.73	658.40	658.62	659.05	659.53	658.49	656.95
26	658.90	658.57	659.47	657.90	654.65	655.60	658.45	658.55	659.00	659.55	658.32	656.93
27	658.97	658.55	659.50	657.95	654.53	655.52	659.00	658.51	659.89	659.27	658.18	656.87
28	659.02	658.53	659.56	657.85	654.44	655.64	659.13	658.45	659.30	658.89	658.17	656.85
29	658.85	658.55	659.61	657.57	---	655.85	658.76	658.63	659.40	658.84	658.16	656.83
30	658.80	658.55	659.70	657.28	---	656.10	658.80	658.80	659.40	658.85	658.14	656.80
31	658.80	---	659.74	657.70	---	656.34	---	658.94	---	658.78	658.12	---
MEAN	658.10	658.61	659.11	658.33	656.08	655.03	656.88	658.37	659.28	659.45	658.45	657.44
MAX	659.02	658.80	659.74	659.80	657.57	656.34	659.13	660.08	659.89	659.76	658.76	658.45
MIN	657.14	658.51	658.41	657.28	654.44	653.87	655.69	656.70	659.00	658.78	658.10	656.80
(-)	1149000	1135000	1203000	1088000	918000	1015000	1149000	1158000	1183000	1148000	1111000	1039000
(=)	+49000	-14000	+68000	-115000	-170000	+97000	+134000	+9000	+25000	-35000	-37000	-72000

CAL YR 2001....+255000

WTR YR 2002....- 61000

(-) Contents, in acre-feet, at end of month.

(=) Change in contents, in acre-feet.

## 06926000 OSAGE RIVER NEAR BAGNELL, MO

LOCATION.--Lat 38°11'29", long 92°36'26", in NW ¼ NE ¼ SE ¼ sec.29, T.40 N., R.15 W., Miller County, Hydrologic Unit 10290111, on center pier of U.S. Highway 54 bridge, 1.3 mi downstream from hydroelectric plant of AmerenUE of Missouri, and at mile 80.5.

DRAINAGE AREA.--14,000 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--October 1880 to current year. Monthly discharge only for some periods published in WSP 1310. Gage-height records collected in this vicinity 1880-1931 are contained in reports of the Missouri River Commission or the National Weather Service.

GAGE.--Water-stage recorder. Datum of gage is 549.13 ft above National Geodetic Vertical Datum of 1929 (levels by the Missouri State Highway and Transportation Commission). Nonrecording gage from October 1880 to Oct. 15, 1930, and recording gage from Oct. 15, 1930, to Sept. 30, 1979, at site 1.7 mi downstream at datum 0.56 ft lower.

REMARKS.--Records fair. Flow regulated by Lake of the Ozarks (06925500), 1.3 mi upstream.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximim stage prior to 1943, 43.1 ft in June 1844 (former site and datum), discharge, 164,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	413	2870	759	2560	25700	11000	1830	21100	39900	1750	4100	1010
2	1050	1050	534	7380	24800	2540	7590	34100	39900	1740	2440	611
3	1210	573	3290	5780	21600	2500	9230	28800	40800	2600	1020	604
4	579	537	1410	11800	19200	12300	7380	6650	41600	2440	893	913
5	588	2890	477	6100	19400	9360	6190	2790	43200	3290	1410	2640
6	484	4640	478	4380	13600	4840	551	17900	46600	1460	601	5660
7	473	2370	485	8130	15400	1470	451	21300	47700	701	628	6120
8	473	916	477	8830	14700	501	4160	35400	47800	7970	1060	1510
9	5060	593	472	9140	6990	2900	805	36700	47800	13900	684	7100
10	25600	1330	483	1450	2910	1440	4510	35600	41300	13000	1290	10500
11	21300	490	479	484	10600	4370	5450	35200	35200	3650	1490	1880
12	20900	2740	497	470	12200	1620	4130	35300	33400	3360	1690	574
13	2510	1920	499	464	11900	647	594	36500	34000	1290	5830	538
14	453	1510	485	464	13200	453	1160	35400	33300	767	1460	1200
15	9980	674	480	456	12900	450	3550	34900	32600	10100	1230	724
16	19700	451	528	452	2730	1350	2130	34800	34500	4690	2380	1670
17	14200	456	6130	460	1290	929	2700	35800	34300	6260	741	1110
18	17200	488	3370	2770	8600	7550	2030	35200	34900	6190	581	2850
19	10600	488	11600	984	10300	3770	1770	34800	35200	10100	3490	2920
20	900	485	12700	455	10400	2570	895	34700	35600	4320	2900	953
21	457	485	3690	5360	12500	8540	1320	36500	34900	1620	5810	746
22	466	486	527	3580	11500	12500	5210	36500	35200	9700	6360	1030
23	687	471	488	3420	2390	4630	6340	42100	34600	8890	3130	764
24	532	430	490	5290	1290	4370	4010	49000	30500	2820	628	1530
25	465	963	488	4010	4990	10800	8150	49200	28500	1950	564	1090
26	889	570	2920	1670	9530	11500	12600	48800	31000	5410	5430	555
27	566	1080	2700	586	12300	9920	10400	48700	28700	7670	4560	1820
28	472	859	929	3020	11000	4690	12300	48600	9060	9310	744	651
29	7850	484	1750	7650	---	2280	20500	42400	5450	2350	577	564
30	2790	470	767	15000	---	506	26800	37200	4480	1710	567	634
31	704	---	4940	24900	---	560	---	37900	---	4150	573	---
MEAN	5469	1126	2107	4758	11570	4608	5825	34510	34070	5005	2092	2016
MAX	25600	4640	12700	24900	25700	12500	26800	49200	47800	13900	6360	10500
MIN	413	430	472	452	1290	450	451	2790	4480	701	564	538
IN.	0.45	0.09	0.17	0.39	0.86	0.38	0.46	2.84	2.72	0.41	0.17	0.16

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1931 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	7194	8521	8109	8012	10040	13570	15610	15990	15550	9647	4937	5720
MAX	67300	45270	45050	34700	34720	57300	70040	92260	78160	96780	26560	54540
(WY)	1987	1987	1993	1993	1949	1973	1973	1943	1935	1951	1993	1951
MIN	471	538	562	554	535	359	452	516	515	492	510	486
(WY)	1957	1957	1996	2001	1964	1931	1931	1956	1931	1931	1956	1954

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1931 - 2002 <sup>a</sup>
ANNUAL MEAN	8429	9397	10230
HIGHEST ANNUAL MEAN			23360
LOWEST ANNUAL MEAN			1046
HIGHEST DAILY MEAN	35300 Jun 15-17,20	49200 May 25	212000 May 19 1943
LOWEST DAILY MEAN	405 Sep 24	413 Oct 1	235 Apr 23 1971
ANNUAL SEVEN-DAY MINIMUM	476 Nov 18	464 Jan 11	320 Mar 3 1931
MAXIMUM PEAK FLOW	---	50000 May 24	220000 May 19 1943
MAXIMUM PEAK STAGE	---	20.45 May 24	48.80 May 19 1943
INSTANTANEOUS LOW FLOW	---	323 Nov 24	183 Sep 9 1969
ANNUAL RUNOFF (INCHES)	8.17	9.11	9.93
10 PERCENT EXCEEDS	27500	34900	30300
50 PERCENT EXCEEDS	2600	2920	4020
90 PERCENT EXCEEDS	488	485	506

<sup>a</sup> Post-regulation period.

## OSAGE RIVER BASIN

06926510 OSAGE RIVER BELOW ST. THOMAS, MO

LOCATION.--Lat 38°25'18", long 92°12'31", in NW ¼ NW ¼ sec.1, T.42 N., R.12 W., Cole County, Hydrologic Unit 10290111, on downstream bridge pier of State Highway B, 3.8 mi north of St. Thomas, and at mile 34.5.

DRAINAGE AREA.--14,584 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--Oct. 1, 1996 to current year. August 1931 to Sept. 30, 1996, records collected at site 8.6 mi upstream, published as Osage River near St. Thomas (06926500).

GAGE.--Water-stage recorder. Datum of gage is 525.72 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair. Considerable regulation by Lake of the Ozarks (06925500), 47.2 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	458	1190	765	5050	31900	9630	1050	21500	39400	3300	4250	632
2	444	3420	916	3020	26900	10600	2330	31800	40000	1910	4020	821
3	815	1630	920	6800	22400	2710	7890	31800	40100	2060	2230	761
4	1140	964	2850	6520	20500	6490	7950	17700	41500	2620	1260	643
5	868	801	1630	9960	20300	8600	7900	5490	41900	5390	997	746
6	755	2940	799	5710	13600	9480	4540	8020	45100	2200	1310	2160
7	624	4670	683	5080	14800	4220	1270	19500	47100	1400	865	5640
8	559	2420	657	8350	13900	2200	1550	44700	47500	1070	710	6240
9	539	1300	637	7070	16200	1470	3810	53500	47700	9790	892	1680
10	15400	936	623	7820	4110	3330	1540	47600	45600	14100	915	8170
11	24900	1320	623	1800	4740	2600	5280	42700	38500	11600	1160	9580
12	18400	773	725	835	9050	3510	6260	41000	34200	5320	1500	1810
13	15200	2260	1210	700	12000	2120	3750	52800	33800	5690	1700	791
14	2560	1950	1200	662	11600	1330	1240	49600	34700	1860	5570	654
15	1880	1450	1120	637	11800	903	1270	45800	33200	1650	1670	987
16	16600	1080	1960	620	10600	822	e4190	43800	33100	11500	1350	944
17	14300	659	5490	607	2560	1400	e3370	47300	34600	4160	2000	1360
18	16000	598	7990	608	2200	1870	e3520	45700	34200	6120	1160	1260
19	14100	624	5730	2610	9160	7010	e2520	38300	35000	7180	798	2170
20	7680	619	11800	1360	8890	4930	7310	35800	35200	9350	3720	2560
21	1510	602	11500	886	11300	3990	9140	36300	35000	4400	2760	1280
22	800	600	3470	4950	11000	11500	4750	36900	34800	2270	5910	755
23	823	599	1290	3190	9560	8850	5860	38100	34900	10000	6600	1020
24	2170	642	958	3810	2450	4290	5260	48400	32000	7630	2670	907
25	1340	636	859	4440	1690	4600	4830	52100	28900	2770	991	1240
26	927	817	810	3940	6140	11600	9970	50000	28000	2020	781	1230
27	1040	924	2530	1830	9880	12000	12000	49600	29500	6660	5690	684
28	968	1020	3040	1050	11300	8140	12100	49200	22000	7820	3980	1360
29	1280	1170	1440	3490	---	4540	15900	47200	6370	8990	1150	939
30	7400	774	1620	9240	---	2750	25600	39200	3940	2240	713	654
31	2790	---	1290	29200	---	1330	---	37600	---	1770	657	---
MEAN	5622	1313	2488	4576	11800	5123	6132	39000	34590	5317	2257	1989
MAX	24900	4670	11800	29200	31900	12000	25600	53500	47700	14100	6600	9580
MIN	444	598	623	607	1690	822	1050	5490	3940	1070	657	632
IN.	0.45	0.10	0.20	0.36	0.85	0.41	0.47	3.10	2.66	0.42	0.18	0.15

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

MEAN	9775	10130	8844	7654	14020	18450	15920	19210	23410	11240	4624	4278
MAX	41410	35360	16580	18890	27140	35430	32900	43010	37210	21200	8775	14790
(WY)	1999	1999	1999	1998	1999	1997	1998	1999	1999	1999	1998	1998
MIN	661	629	1670	687	5161	5123	1814	1334	6089	5317	2257	1263
(WY)	2001	2001	2001	2001	2000	2002	2000	2000	2000	2002	2002	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL MEAN	9166		9992		12310	
HIGHEST ANNUAL MEAN					22740	
LOWEST ANNUAL MEAN					3699	
HIGHEST DAILY MEAN	44200	Jun 6	53500	May 9	63600	Jul 27 1998
LOWEST DAILY MEAN	444	Oct 2	444	Oct 2	320	Sep 24 1999
ANNUAL SEVEN-DAY MINIMUM	595	Sep 26	612	Nov 18	563	Oct 26 2000
MAXIMUM PEAK FLOW	---		54800	May 13	74700	Jul 26 1998
MAXIMUM PEAK STAGE	---		17.73	May 13	21.86	Jul 26 1998
INSTANTANEOUS LOW FLOW	---		436	Oct 2	320	Sep 24 1999
ANNUAL RUNOFF (INCHES)	8.58		9.36		11.54	
10 PERCENT EXCEEDS	29600		35100		35100	
50 PERCENT EXCEEDS	2850		3520		5860	
90 PERCENT EXCEEDS	635		755		665	

e Estimated

06926510 OSAGE RIVER BELOW ST. THOMAS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1974 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

WATER TEMPERATURE: October 1974 to September 1981.

REMARKS.--National Stream-Quality Accounting Network station October 1975 to September 1995. Ambient Water-Quality Monitoring Network station October 1995 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 398 microsiemens per centimeter, Jan. 1, 1981; minimum daily, 140 microsiemens per centimeter, Sept. 3, 1981.

WATER TEMPERATURE: Maximum daily, 30.0 °C, July 29, 1977, July 25 and Aug. 11, 1980; minimum daily, 0.0 °C, Jan. 21, 1978.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second)		OXYGEN, DIS-SOLVED (mg/L)	OXYGEN, (percent saturation)	pH WATER WHOLE FIELD (standard units)	SPE-CIFIC CON-DUCT-ANCE (µS/cm)	TEMPER-ATURE WATER (deg C)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> )	CALCIUM DIS-SOLVED (mg/L as Ca)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg)	POTAS-SIUM, DIS-SOLVED (mg/L as K)	
			(00061)	(00300)	(00301)	(00400)	(00095)	(00010)	(00900)	(00915)	(00925)	(00935)		
NOV 07...	0915	ENVIRONMENTAL			6190	8.2	84	7.6	254	15.9	120	33.9	9.68	2.64
JAN 09...	1000	ENVIRONMENTAL			7280	11.0	92	7.7	248	6.9	--	--	--	--
MAR 07...	0940	ENVIRONMENTAL			4420	12.8	104	8.3	272	6.1	--	--	--	--
MAY 08...	1000	ENVIRONMENTAL			43700	8.3	84	7.9	243	15.3	120	29.8	11.1	2.65
JUL 15...	1030	ENVIRONMENTAL			992	7.3	89	7.7	257	23.6	--	--	--	--
SEP 03...	1300	ENVIRONMENTAL			740	6.4	88	7.8	271	30.3	--	--	--	--
DATE		SODIUM, DIS-SOLVED (mg/L as Na)	ANC WATER	ANC WATER	ANC BICAR-BONATE	ANC CAR-BONATE	CHLO-RIDE, DIS-SOLVED	FLUO-RIDE, DIS-SOLVED	SULFATE DIS-SOLVED	RESIDUE TOTAL AT 105 DEG. C,	SOLIDS, RESIDUE AT 180 DEG. C	NITRO-GEN, AMMONIA DIS-SOLVED	NITRO-GEN, AMMONIA + ORGANIC TOTAL	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED
			UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> )	UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> )	IT FIELD (mg/L as HCO <sub>3</sub> )	IT FIELD (mg/L as CO <sub>3</sub> )	(mg/L as Cl)	(mg/L as F)	(mg/L as SO <sub>4</sub> )	PENDEDED (mg/L)	SOLVED (mg/L)	(mg/L as N)	(mg/L as N)	(mg/L as N)
NOV 07...	5.65	96	96	118	0	12.3	E.1	17.8	18	140	<.04	.37	.14	
JAN 09...	--	93	93	113	0	--	--	--	10	--	E.02	.32	.32	
MAR 07...	--	113	112	137	0	--	--	--	<10	--	<.04	.32	.17	
MAY 08...	4.15	108	108	132	0	4.85	<.1	13.3	152	148	<.04	.77	.18	
JUL 15...	--	103	104	126	0	--	--	--	105	--	<.04	.74	.37	
SEP 03...	--	109	110	134	0	--	--	--	11	--	<.04	.49	<.05	
DATE		NITRO-GEN, NITRITE DIS-SOLVED	PHOS-PHORUS DIS-SOLVED	PHOS-PHORUS ORTHO, DIS-SOLVED	PHOS-PHORUS TOTAL	E COLI, MTEC MF	COLI-FORM, FECAL, 0.7 µm-MF	FECAL STREP, KF STRP MF, WATER	ALUM-INUM, DIS-SOLVED	ALUM-INUM, TOTAL RECOV-ERABLE	ARSENIC DIS-SOLVED	CADMIUM DIS-SOLVED	CADMIUM WATER UNFLTRD TOTAL	COPPER, DIS-SOLVED
		(mg/L as N)	(mg/L as P)	(mg/L as P)	(mg/L as P)	(col./100 mL)	(col./100 mL)	(col./100 mL)	(µg/L as Al)	(µg/L as Al)	(µg/L as As)	(µg/L as Cd)	(µg/L as Cd)	(µg/L as Cu)
NOV 07...	<.008	<.06	E.01	E.06	38	K75	26	36	181	1.0	<.04	<.1	<6	
JAN 09...	<.008	<.06	E.02	E.03	K4	K10	K6	--	--	--	--	--	--	
MAR 07...	<.008	<.06	<.02	<.06	<1	K1	K15	--	--	--	--	--	--	
MAY 08...	E.005	E.03	.02	.15	K1900	K5940	K4680	149	1090	.7	<.04	<.1	<6	
JUL 15...	.016	E.04	.03	.10	K400	290	445	--	--	--	--	--	--	
SEP 03...	<.008	E.04	.03	.08	K8	K9	K65	--	--	--	--	--	--	

## OSAGE RIVER BASIN

06926510 OSAGE RIVER BELOW ST. THOMAS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
07...	13	E.06	M	5.0	<.01	<.3	5	7
JAN								
09...	--	--	--	--	--	--	--	--
MAR								
07...	--	--	--	--	--	--	--	--
MAY								
08...	90	.39	4	25.1	E.01	E.2	--	21
JUL								
15...	--	--	--	--	--	--	--	--
SEP								
03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.



06928000 GASCONADE RIVER NEAR HAZELGREEN, MO

LOCATION.--Lat 37°45'33", long 92°27'06", in SE ¼ SE ¼ sec.15, T.35 N., R.14 W., Laclede County, Hydrologic Unit 10290201 on downstream end of center pier of bridge on south outer road, 400 ft upstream from eastbound bridge of Interstate 44, 1 mi downstream from Osage Fork, 1.5 mi west of Hazelgreen, and at mile 180.

DRAINAGE AREA.--1,250 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to September 1971, October 2000 to current year. Prior to April 1929 monthly discharge only published in WSP 1310.

GAGE.--Water-stage recorder. Datum of gage is 844.75 ft above National Geodetic Vertical Datum of 1929. Prior to March 6, 1956, nonrecording gage at present site and datum. March 6, 1956 to Dec. 17, 1957, nonrecording gage at site 750 ft downstream at present datum and Dec. 18, 1957 to Aug. 20, 1958, nonrecording gage at present site and datum. Aug. 20, 1958 to September 1971, water-stage recorder at present site and datum.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of January 1916 reached a stage of 30.6 ft from flood mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	122	456	362	12400	442	1310	1480	777	204	136	176
2	65	129	802	346	11500	926	1170	1290	701	195	128	159
3	63	127	668	323	3800	2050	1060	1130	637	196	123	145
4	62	126	536	311	2610	2340	952	1010	590	189	119	136
5	85	123	443	285	2050	1830	854	897	762	186	141	126
6	86	123	381	271	1710	1620	778	812	658	181	146	117
7	85	122	336	263	1440	1550	726	1050	636	175	138	111
8	83	122	302	253	1260	1450	748	10400	608	171	122	106
9	81	120	275	247	1120	1390	3110	37800	542	165	112	101
10	294	118	254	242	1020	1490	3180	22200	495	160	110	100
11	150	e116	236	233	917	1580	2250	6830	466	163	109	98
12	127	e113	235	227	824	1460	1790	5670	458	158	101	98
13	121	111	282	219	747	1390	1570	18300	645	150	110	95
14	118	109	404	213	686	1270	1940	12200	779	149	183	92
15	118	107	862	208	633	1190	2200	4890	683	167	274	93
16	125	106	1400	201	588	1140	1880	3500	567	236	254	92
17	124	104	4920	197	551	1330	1590	7330	488	228	293	94
18	120	102	11700	193	534	1280	1750	17500	433	198	262	96
19	116	102	5140	195	e503	1400	1520	14100	396	211	228	99
20	114	101	2610	194	e589	4820	1360	4610	363	193	215	118
21	113	100	1820	189	e680	7030	1590	3160	333	263	214	112
22	112	100	1400	187	642	3440	2680	2460	309	384	239	119
23	111	99	1140	189	626	2460	2020	2060	286	352	250	185
24	114	129	959	219	588	2030	1620	1850	267	297	214	173
25	110	138	810	276	560	3000	1710	1660	260	258	193	157
26	105	289	700	639	533	4910	1590	1490	252	221	181	139
27	102	390	614	681	499	3260	1420	1270	256	200	234	124
28	106	337	548	614	469	2470	1870	1120	249	182	262	114
29	124	308	491	552	---	2070	1700	1020	235	166	259	105
30	128	328	442	956	---	1790	1430	940	218	155	225	98
31	126	---	401	4400	---	1530	---	854	---	145	197	---
MEAN	112	151	1341	448	1789	2127	1646	6158	478	203	186	119
MAX	294	390	11700	4400	12400	7030	3180	37800	779	384	293	185
MIN	62	99	235	187	469	442	726	812	218	145	101	92
IN.	0.10	0.13	1.24	0.41	1.49	1.96	1.47	5.68	0.43	0.19	0.17	0.11

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	495	644	714	938	1204	1572	1744	1918	1112	540	287	361
MEAN	495	644	714	938	1204	1572	1744	1918	1112	540	287	361
MAX	4943	4273	3361	4805	3209	6584	10180	7340	8710	5322	1467	2519
(WY)	1950	1952	1943	1950	1938	1945	1945	1943	1935	1958	1946	1970
MIN	31.6	65.8	72.6	68.0	91.2	141	130	202	83.2	41.8	30.8	25.6
(WY)	1957	1954	1956	1956	1964	1956	1956	1932	1936	1934	1936	1954

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	532	1232	959
HIGHEST ANNUAL MEAN			2236
LOWEST ANNUAL MEAN			123
HIGHEST DAILY MEAN	17500	Feb 26	58800
LOWEST DAILY MEAN	53	Aug 28	19
ANNUAL SEVEN-DAY MINIMUM	60	Aug 24	21
MAXIMUM PEAK FLOW	---	49500	May 9
MAXIMUM PEAK STAGE	---	25.95	May 9
INSTANTANEOUS LOW FLOW	---	61	Oct 4
ANNUAL RUNOFF (INCHES)	5.78	13.38	10.42
10 PERCENT EXCEEDS	850	2290	2010
50 PERCENT EXCEEDS	248	308	345
90 PERCENT EXCEEDS	85	108	85

e Estimated

## GASCONADE RIVER BASIN

06928300 ROUBIDOUX CREEK ABOVE FT. LEONARD WOOD, MO

LOCATION.--Lat 37°36'04", long 92°14'02", in NE ¼ SW ¼ NE ¼ sec.3, T.33 N., R.12 W., Pulaski County, Hydrologic Unit 10290201, on State Highway 17 bridge, 12 mi south of Ft. Leonard Wood.

DRAINAGE AREA.--165 mi<sup>2</sup>.

PERIOD OF RECORD.--Dec. 29, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage unknown.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.8	6.8	324	39	3000	53	164	219	68	12	6.2	3.4
2	3.5	9.3	192	35	633	486	145	197	58	12	6.7	3.0
3	3.3	11	130	33	418	506	125	174	50	12	7.3	2.8
4	3.4	11	94	31	304	321	107	151	46	12	e9.8	2.9
5	5.7	11	74	29	232	254	96	131	53	13	e7.2	2.9
6	6.6	9.6	60	29	194	267	88	119	60	13	e6.4	2.8
7	6.4	9.0	50	27	167	250	84	221	52	12	5.9	3.0
8	5.5	8.6	44	26	145	215	485	7580	44	11	5.4	2.7
9	4.8	8.3	36	26	132	251	726	2230	38	9.5	4.9	2.5
10	5.6	8.3	32	25	119	308	459	991	36	9.9	4.8	2.3
11	7.8	8.1	28	24	102	258	325	614	36	11	4.6	2.4
12	8.7	8.0	34	22	91	290	255	1110	37	12	4.4	2.3
13	8.2	7.9	197	21	82	270	456	4510	162	14	5.4	2.2
14	8.0	7.8	271	21	74	231	469	1050	122	13	8.3	2.1
15	7.9	7.8	246	19	68	199	405	635	75	11	8.1	2.2
16	8.3	8.6	863	19	63	397	298	481	56	10	7.2	2.6
17	7.8	7.6	3790	18	58	337	493	5270	46	9.8	7.0	3.5
18	7.5	7.4	873	18	54	262	350	2430	38	10	6.6	3.9
19	7.8	7.5	460	20	56	1140	266	867	32	10	6.2	4.7
20	7.2	7.2	305	19	74	2020	232	594	28	10	6.3	5.9
21	7.4	7.1	226	18	110	650	456	451	24	9.6	6.0	5.6
22	7.4	6.9	180	18	109	424	361	349	21	9.8	5.3	5.0
23	7.0	7.1	146	20	97	329	267	279	19	14	5.5	4.5
24	7.2	82	118	143	87	274	235	234	17	12	5.9	4.0
25	7.3	194	97	267	80	996	218	206	16	9.6	5.8	3.5
26	7.7	106	82	196	71	647	190	172	18	8.6	5.2	3.1
27	7.2	72	72	150	63	431	335	145	16	7.6	5.0	2.9
28	6.9	59	64	121	58	340	334	124	15	7.2	4.5	2.6
29	6.8	58	56	100	---	279	253	111	14	6.8	4.2	2.4
30	7.0	318	48	171	---	229	213	96	13	7.1	3.9	2.5
31	6.8	---	44	3350	---	190	---	82	---	7.4	3.6	---
MEAN	6.66	36.0	298	163	241	423	296	1027	43.7	10.6	5.92	3.21
MAX	8.7	318	3790	3350	3000	2020	726	7580	162	14	9.8	5.9
MIN	3.3	6.8	28	18	54	53	84	82	13	6.8	3.6	2.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

MEAN	5.63	22.4	153	69.5	223	174	114	362	41.7	9.77	5.14	5.79
MAX	6.66	36.0	298	163	401	423	296	1027	73.6	10.5	5.92	11.9
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2001	2002	2002	2001
MIN	4.60	8.76	8.49	17.2	35.2	43.4	18.0	8.17	7.71	8.76	4.02	2.31
(WY)	2001	2001	2001	2000	2000	2000	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 2000 - 2002		
ANNUAL MEAN	81.5			214			134		
HIGHEST ANNUAL MEAN							214		
LOWEST ANNUAL MEAN							54.5		
HIGHEST DAILY MEAN	4330			Feb 25			7580		
LOWEST DAILY MEAN	3.1			Aug 28			1.2		
ANNUAL SEVEN-DAY MINIMUM	3.5			Aug 23			1.3		
MAXIMUM PEAK FLOW	---						12900		
MAXIMUM PEAK STAGE	---						14.86		
INSTANTANEOUS LOW FLOW	---						2.0		
10 PERCENT EXCEEDS	129						427		
50 PERCENT EXCEEDS	21						35		
90 PERCENT EXCEEDS	5.5						4.7		

e Estimated

06928430 ROUBIDOUX CREEK BELOW FT. LEONARD WOOD, MO

LOCATION.--Lat 37°49'40", long 92°12'19", in SE ¼ SW ¼ SW ¼ sec.24, R.36 N., R.12 W., Pulaski County, Hydrologic Unit 10290201, on right bank 400 ft downstream from Interstate 44 bridge, on Superior Road, 0.9 mi south of Business 44, and 0.6 mi upstream from Roubidoux Spring.

DRAINAGE AREA.--287 mi<sup>2</sup>.

PERIOD OF RECORD.--Feb. 23, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage unknown.

REMARKS.--Records fair. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.57	1.8	2.8	3.0	5110	2.4	88	210	6.6	0.28	0.93	0.58
2	0.57	2.5	26	2.8	1280	15	66	208	6.3	0.47	0.89	0.62
3	0.62	2.2	32	2.6	585	738	46	153	4.9	0.95	0.66	0.65
4	0.63	1.8	6.4	2.4	313	275	29	110	3.9	0.78	0.52	0.46
5	2.1	1.8	1.5	2.3	200	235	15	70	5.6	0.50	0.49	0.33
6	1.3	1.8	1.0	2.3	134	180	8.2	41	5.8	0.49	0.51	0.34
7	0.69	2.8	1.2	2.2	87	180	6.3	87	5.9	0.49	0.52	0.34
8	0.67	2.7	1.2	2.0	55	110	7.4	7200	4.4	0.49	0.54	0.43
9	0.99	1.9	0.88	2.2	41	114	600	5560	3.7	0.54	0.59	0.57
10	9.1	1.7	0.80	1.8	26	195	575	1360	4.1	1.6	0.78	0.40
11	2.0	1.7	0.85	1.7	10	184	325	613	3.7	1.0	1.6	0.26
12	1.2	1.7	1.7	1.6	9.5	182	203	500	3.6	0.82	1.3	0.21
13	1.1	1.7	1.8	1.4	8.4	205	224	7240	3.8	0.77	3.1	0.17
14	1.0	1.6	2.2	1.5	7.3	166	327	1570	3.0	0.47	2.0	0.16
15	0.93	1.7	2.1	1.4	6.7	124	410	642	2.6	0.45	1.3	0.20
16	1.1	1.7	35	1.4	5.8	111	260	360	1.7	0.56	1.3	0.21
17	0.98	1.7	3680	1.4	5.2	264	266	3310	1.4	0.56	1.2	0.23
18	2.0	1.7	2080	1.3	4.6	195	346	5660	1.2	0.49	1.1	0.19
19	2.5	1.8	956	1.5	4.6	193	369	978	1.1	0.61	1.4	0.21
20	2.5	1.5	566	1.4	4.4	2830	306	503	1.0	0.60	2.3	0.47
21	2.6	1.4	327	1.3	3.8	1170	331	292	0.99	0.52	1.5	0.26
22	2.6	1.3	176	1.3	3.4	559	484	197	0.87	0.62	1.4	0.13
23	3.2	1.4	86	1.5	2.9	319	278	137	0.67	1.3	1.5	0.06
24	3.6	3.3	38	1.6	2.6	229	195	105	0.66	0.76	1.8	0.04
25	3.0	1.8	16	1.3	2.9	1120	156	76	0.71	0.60	1.6	0.03
26	2.6	1.2	7.9	1.2	2.8	1320	125	53	0.51	0.85	1.1	0.06
27	2.2	0.98	5.1	4.1	2.6	622	121	33	0.38	1.1	0.93	0.09
28	2.1	1.5	4.0	8.6	2.4	370	376	19	0.34	1.2	0.82	0.10
29	2.0	2.3	4.2	4.2	---	253	277	13	0.33	1.2	0.76	0.11
30	1.8	3.5	3.7	12	---	188	202	9.4	0.29	1.4	0.53	0.12
31	1.8	---	3.4	1560	---	133	---	7.4	---	1.4	0.51	---
MEAN	1.94	1.88	260	52.8	283	412	234	1204	2.67	0.77	1.14	0.27
MAX	9.1	3.5	3680	1560	5110	2830	600	7240	6.6	1.6	3.1	0.65
MIN	0.57	0.98	0.80	1.2	2.4	2.4	6.3	7.4	0.29	0.28	0.49	0.03

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	1.61	1.72	130	26.7	316	150	79.3	408	32.6	0.71	0.56	0.25
MAX	1.94	1.88	260	52.8	350	412	234	1204	94.5	0.81	1.14	0.29
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2001	2001	2002	2001
MIN	1.29	1.57	0.70	0.61	283	2.55	1.76	0.87	0.70	0.55	0.24	0.19
(WY)	2001	2001	2001	2001	2002	2000	2000	2000	2000	2000	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 2000 - 2002
ANNUAL MEAN	62.0	206	123
HIGHEST ANNUAL MEAN			206
LOWEST ANNUAL MEAN			39.8
HIGHEST DAILY MEAN	5120	Feb 25	7240
LOWEST DAILY MEAN	0.10	Sep 5	0.03
ANNUAL SEVEN-DAY MINIMUM	0.15	Aug 17	0.07
MAXIMUM PEAK FLOW	---	14000	May 9
MAXIMUM PEAK STAGE	---	14.13	May 9
INSTANTANEOUS LOW FLOW	---	0.03	Sep 25
10 PERCENT EXCEEDS	25	337	200
50 PERCENT EXCEEDS	1.4	2.3	1.5
90 PERCENT EXCEEDS	0.25	0.49	0.30

## GASCONADE RIVER BASIN

06928440 ROUBIDOUX SPRING AT WAYNESVILLE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°49'30", long 92°11'53", in SW ¼ NW ¼ NE ¼ sec.25 T.36 N., R.12 W., Pulaski County, Hydrologic Unit 10290201, from I-44 Exit 159 at Waynesville to Business 44, approximately 1.5 mi to Superior Road, south on Superior Road 0.3 mi to spring.

PERIOD OF RECORD.--November 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
NOV 19...	0945	ENVIRONMENTAL	8.3	5.9	61	7.6	412	15.3	220	44.8	27.0	.52
JAN 22...	1300	ENVIRONMENTAL	24	9.6	89	6.9	355	10.8	--	--	--	--
MAR 14...	0920	ENVIRONMENTAL	204	9.6	88	7.3	285	9.8	--	--	--	--
MAY 08...	1015	ENVIRONMENTAL	400	6.9	69	7.7	296	14.1	160	32.6	18.3	1.02
JUL 15...	1335	ENVIRONMENTAL	40	6.0	63	7.4	362	16.5	--	--	--	--
SEP 10...	1455	ENVIRONMENTAL	30	6.1	63	7.5	407	15.9	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 19...	2.68	206	208	253	0	5.74	.1	6.3	<10	240	<.04	E.06	.38
JAN 22...	--	165	170	207	0	--	--	--	<10	--	<.04	E.07	.92
MAR 14...	--	133	134	164	0	--	--	--	<10	--	<.04	<.10	.41
MAY 08...	2.88	147	147	179	0	5.25	<.1	6.8	12	165	<.04	E.08	.29
JUL 15...	--	186	187	229	0	--	--	--	<10	--	<.04	<.10	.37
SEP 10...	--	94	96	118	0	--	--	--	<10	--	<.04	E.08	.52

DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 19...	<.008	<.06	<.02	<.06	K2	K2	K10	8	30	.2	<.04	<.1	<6
JAN 22...	<.008	<.06	<.02	<.06	K9	K11	K2	--	--	--	--	--	--
MAR 14...	<.008	<.06	<.02	<.06	K2	K10	K10	--	--	--	--	--	--
MAY 08...	<.008	<.06	<.02	<.06	K25	63	480	18	201	.2	<.04	<.1	<6
JUL 15...	E.005	<.06	<.02	<.06	K18	K10	K9	--	--	--	--	--	--
SEP 10...	<.008	<.06	E.01	<.06	K3	K5	K1	--	--	--	--	--	--

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)	
	NOV 19...	JAN 22...	MAR 14...	MAY 08...	JUL 15...	SEP 10...								
	<10	<.08	<1	<2.0	<.01	E.2	--	5	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	13	<.08	<1	<2.0	<.01	<.3	--	1	<.006	<.006	<.004	<.005	<.007	
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	BEN- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	
	NOV 19...	JAN 22...	MAR 14...	MAY 08...	JUL 15...	SEP 10...								
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<.010	<.002	E.007	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFO WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THON WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN WATER FLTRD 0.7 µ GF, REC (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THON, DIS- SOLVED (µg/L) (39542)	
	NOV 19...	JAN 22...	MAR 14...	MAY 08...	JUL 15...	SEP 10...								
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- GARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	
	NOV 19...	JAN 22...	MAR 14...	MAY 08...	JUL 15...	SEP 10...								
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	
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## GASCONADE RIVER BASIN

06928440 ROUBIDOUX SPRING AT WAYNESVILLE, MO--Continued  
 (Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
NOV 19...	--	--	--
JAN 22...	--	--	--
MAR 14...	--	--	--
MAY 08...	<.005	<.002	<.009
JUL 15...	--	--	--
SEP 10...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## 06930000 BIG PINEY RIVER NEAR BIG PINEY, MO

LOCATION.--Lat 37°39'56", long 92°03'01", in NE ¼ SE ¼ sec. 8, T.34 N., R.10 W., Pulaski County, Hydrologic Unit 10290202, on downstream side of left pier of Ross bridge, 3.0 mi east of Big Piney, 14.8 mi upstream from Spring Creek, and at river mile 22.

DRAINAGE AREA.--560 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1921 to Sept. 30, 1982, April 4 1988 to Sept. 30, 1996, Nov. 23, 1999 to current year.

REVISED RECORDS.--WSP 826: 1935. WSP 1176: 1943, 1945. WSP 1340: 1922-23, 1927-28(M), 1933(M), 1935(M).

GAGE.--Water-stage recorder. Datum of gage is 800.99 ft above National Geodetic Vertical Datum of 1929. Prior to July 12, 1961, nonrecording gage at same site and datum.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 24.54 ft, Dec. 4, 1982, from floodmark, present datum, discharge, 81,200 ft<sup>3</sup>/s, from indirect measurement.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	79	108	771	262	6870	333	643	641	521	179	178	137
2	79	116	568	248	2230	430	604	625	483	178	180	134
3	85	117	437	234	1290	466	562	583	446	176	175	132
4	81	111	365	223	993	578	516	533	414	180	175	130
5	95	109	318	214	805	620	483	489	406	180	158	126
6	97	107	284	212	690	602	456	461	397	180	148	123
7	94	107	256	207	615	600	442	607	377	175	143	131
8	96	103	238	201	556	579	625	10300	351	167	137	126
9	95	99	219	194	504	577	2380	21400	334	164	137	121
10	97	99	201	188	465	1410	1210	4660	358	161	139	116
11	109	99	188	184	429	912	938	2290	328	170	142	114
12	106	98	194	179	396	892	822	2050	339	195	145	113
13	110	97	225	175	372	943	865	7630	357	187	170	113
14	114	97	367	171	350	834	1560	3380	361	247	206	113
15	111	98	455	168	330	758	1940	2030	333	209	344	111
16	115	97	547	164	314	857	1100	1640	306	192	303	112
17	110	97	4500	162	301	915	943	6050	286	178	244	126
18	104	96	3950	161	327	802	993	13000	274	174	211	124
19	105	98	1470	169	325	952	851	3100	261	171	198	135
20	102	95	1020	165	343	4360	780	1940	253	438	203	163
21	100	95	792	162	467	2370	928	1520	245	582	191	168
22	100	97	659	159	500	1370	1010	1280	233	372	174	177
23	102	99	570	161	464	1060	848	1110	215	288	165	162
24	106	159	499	192	433	922	781	1000	209	300	159	144
25	115	788	446	470	411	1030	1570	918	206	418	155	132
26	137	481	404	541	391	1180	818	829	203	305	155	128
27	132	346	373	464	368	1000	788	745	196	246	164	124
28	127	297	345	411	346	894	793	689	191	214	165	120
29	121	275	321	374	---	823	722	645	189	194	154	118
30	116	397	300	375	---	757	651	605	188	184	148	116
31	111	---	279	938	---	693	---	564	---	177	142	---
MEAN	105	169	696	262	782	984	921	3010	309	232	178	130
MAX	137	788	4500	938	6870	4360	2380	21400	521	582	344	177
MIN	79	95	188	159	301	333	442	461	188	161	137	111
IN.	0.22	0.34	1.43	0.54	1.45	2.03	1.83	6.20	0.62	0.48	0.37	0.26

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	267	478	453	550	633	827	986	940	601	288	238	255
MAX	1261	2127	1940	2554	2237	2565	3637	3324	4490	1969	1947	1959	
(WY)	1950	1952	1943	1950	1982	1945	1927	1990	1983	1951	1927	1993	
MIN	82.3	106	98.5	98.5	127	154	168	132	111	89.3	80.7	72.9	
(WY)	1957	1965	1956	1956	1934	1981	2000	2000	1934	1934	2001	1954	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	275	650	544
HIGHEST ANNUAL MEAN			1179
LOWEST ANNUAL MEAN			149
HIGHEST DAILY MEAN	9980	Feb 25	21400
LOWEST DAILY MEAN	60	Sep 7	79
ANNUAL SEVEN-DAY MINIMUM	63	Sep 2	87
MAXIMUM PEAK FLOW	---		38300
MAXIMUM PEAK STAGE	---		20.60
INSTANTANEOUS LOW FLOW	---		77
ANNUAL RUNOFF (INCHES)	6.68		15.76
10 PERCENT EXCEEDS	441		1010
50 PERCENT EXCEEDS	150		275
90 PERCENT EXCEEDS	82		108
			122

## GASCONADE RIVER BASIN

06930060 BIG PINEY RIVER BELOW FT. LEONARD WOOD, MO

LOCATION.--Lat 37°45'35", long 92°03'30", in SE 1/4 SW 1/4 NW 1/4 sec.17, T.35 N. R.10 W., Pulaski County, Hydrologic Unit 10290202, on right downstream wingwall of bridge on East Gate Ft. Leonard Wood road, 1.8 mi west of Highway J, 8.5 mi south of Interstate 44.

DRAINAGE AREA.--593 mi<sup>2</sup>.

PERIOD OF RECORD.--Dec. 3, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	133	753	324	6690	339	701	753	583	244	222	194
2	112	141	686	301	3350	462	656	741	549	236	221	192
3	112	143	540	286	1500	632	612	704	516	240	227	186
4	115	139	449	274	1150	676	570	657	490	238	219	185
5	124	137	390	264	943	674	534	611	479	234	216	181
6	127	135	345	259	818	644	508	579	472	235	207	177
7	122	135	310	252	738	637	488	657	452	228	208	180
8	121	133	288	241	677	622	528	7090	431	223	203	184
9	122	131	266	235	622	612	2190	32300	410	214	198	177
10	131	130	248	228	580	1220	1370	6390	426	211	195	174
11	127	129	233	224	540	1030	1050	2290	409	210	201	170
12	134	130	241	219	515	929	905	1760	402	238	197	169
13	134	129	278	214	455	1030	919	8680	420	230	213	168
14	135	129	356	209	434	915	1120	4650	418	246	237	168
15	134	129	512	204	410	830	2240	2050	403	251	288	169
16	137	130	610	201	388	866	1230	1530	377	232	321	167
17	133	129	3390	199	371	1010	1020	4630	357	226	283	177
18	128	129	5340	197	353	883	1070	20000	339	218	258	181
19	128	130	1680	201	347	889	947	4150	327	215	244	182
20	130	128	1150	199	359	3830	910	2000	316	240	242	212
21	128	128	914	196	428	3600	971	1520	303	590	240	210
22	127	129	779	193	523	2100	1160	1270	293	405	225	218
23	126	132	685	194	489	1470	967	1110	284	338	221	217
24	130	188	612	217	455	1110	855	1010	277	279	217	200
25	130	603	554	378	431	1160	1680	940	272	389	213	189
26	147	615	504	622	405	1320	1210	866	275	331	208	182
27	156	433	463	547	382	1160	888	795	261	284	211	183
28	151	362	430	485	358	1020	905	740	259	259	216	176
29	146	329	398	439	---	926	845	698	252	242	207	173
30	139	386	372	441	---	846	772	663	248	232	201	171
31	139	---	347	827	---	764	---	625	---	221	198	---
MEAN	130	198	778	299	882	1103	994	3628	377	264	224	184
MAX	156	615	5340	827	6690	3830	2240	32300	583	590	321	218
MIN	112	128	233	193	347	339	488	579	248	210	195	167

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

MEAN	130	178	471	241	975	619	482	1334	270	188	164	149
MAX	130	198	778	299	1798	1103	994	3628	377	264	224	184
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2002	2002	2002	2002
MIN	129	158	164	195	269	305	200	160	168	147	121	124
(WY)	2001	2001	2001	2000	2000	2000	2000	2000	2000	2000	2001	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL MEAN	384		758		543	
HIGHEST ANNUAL MEAN					758	
LOWEST ANNUAL MEAN					329	
HIGHEST DAILY MEAN	18600	Feb 25	32300	May 9	32300	May 9 2002
LOWEST DAILY MEAN	103	Sep 6, 7	112	Oct 2, 3	103	Sep 6 2001
ANNUAL SEVEN-DAY MINIMUM	107	Sep 2	118	Oct 1	107	Sep 2 2001
MAXIMUM PEAK FLOW	---		43400 <sup>a</sup>	May 9	43400 <sup>a</sup>	May 9 2002
MAXIMUM PEAK STAGE	---		18.89	May 9	18.89	May 9 2002
INSTANTANEOUS LOW FLOW	---		108	Oct 2	103	Sep 6 2001
10 PERCENT EXCEEDS	536		1150		889	
50 PERCENT EXCEEDS	193		321		221	
90 PERCENT EXCEEDS	122		133		128	

<sup>a</sup> From rating extended above 30,000 ft<sup>3</sup>/s.



06930450 BIG PINEY RIVER AT DEVIL'S ELBOW, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°50'53", long 92°03'44, in NW  $\frac{1}{4}$  SE  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec.18, T.36 N., R.10 W., Pulaski County, Hydrologic Unit 10290202, at bridge on County Highway V at Devil's Elbow.

DRAINAGE AREA.--746 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1977 to October 1989, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
NOV 01...	1335	ENVIRONMENTAL	181	10.2	102	8.2	360	14.3	190	38.5	23.5	.53
JAN 22...	1430	ENVIRONMENTAL	234	13.5	110	7.8	308	5.5	--	--	--	--
MAR 27...	0955	ENVIRONMENTAL	2080	10.6	92	7.8	229	8.0	--	--	--	--
MAY 20...	1215	ENVIRONMENTAL	4310	10.5	105	7.8	191	14.9	98	20.7	11.2	.95
JUL 16...	1015	ENVIRONMENTAL	314	7.4	91	7.9	307	24.1	--	--	--	--
SEP 05...	1220	ENVIRONMENTAL	208	8.9	111	8.3	329	25.5	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 01...	6.21	180	181	221	0	6.15	E.1	4.8	<10	192	<.04	E.09	.18
JAN 22...	--	149	152	185	0	--	--	--	<10	--	<.04	E.10	.59
MAR 27...	--	105	105	129	0	--	--	--	76	--	<.04	.20	.62
MAY 20...	2.53	102	102	124	0	4.13	.1	6.7	23	121	E.02	.30	.41
JUL 16...	--	155	156	190	0	--	--	--	27	--	<.04	.11	.26
SEP 05...	--	174	174	213	0	--	--	--	<10	--	<.04	.14	.21

DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 01...	<.008	E.03	E.01	<.06	K1	K7	K8	13	22	.3	<.04	<.1	<6
JAN 22...	<.008	<.06	<.02	<.06	K35	K2	K1	--	--	--	--	--	--
MAR 27...	<.008	<.06	E.01	E.03	K12	104	52	--	--	--	--	--	--
MAY 20...	.014	<.06	<.02	E.04	K50	220	K208	127	249	.2	E.02	<.1	<6
JUL 16...	<.008	<.06	E.01	E.03	K1	25	25	--	--	--	--	--	--
SEP 05...	<.008	<.06	.03	E.04	K3	K9	K14	--	--	--	--	--	--

## GASCONADE RIVER BASIN

06930450 BIG PINEY RIVER AT DEVIL'S ELBOW, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 01...	15	E.06	<1	5.3	<.01	<.3	--	3
JAN 22...	--	--	--	--	--	--	--	--
MAR 27...	--	--	--	--	--	--	--	--
MAY 20...	103	.94	3	12.7	E.01	<.3	--	17
JUL 16...	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

06930800 GASCONADE RIVER ABOVE JEROME, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°55'12", long 91°58'33", in SW  $\frac{1}{4}$  NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec.24, T.37 N., R.10 W., Phelps County, Hydrologic Unit 10290203, at bridge on State Highway D at Jerome, 150 ft upstream from Little Piney Creek, and 0.7 mi upstream from gaging station.

DRAINAGE AREA.--2,570 mi<sup>2</sup>.

PERIOD OF RECORD.--January 1978 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: March 1978 to September 1981.

WATER TEMPERATURE: March 1978 to September 1981.

REMARKS.--National Stream-Quality Accounting Network station January 1978 to September 1993. Ambient Water-Quality Monitoring Network station November 1993 to current year.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 588 microsiemens per centimeter, Sept. 23, 1981; minimum, 133 microsiemens per centimeter, Sept. 1, 1981.

WATER TEMPERATURE: Maximum daily, 34.0 °C, Aug. 11 and 17, 1980; minimum, 0.0 °C on many days during winter period.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CONDUCTANCE (μS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT												
22...	1310	ENVIRONMENTAL	504	8.7	91	8.0	328	16.0	--	--	--	--
NOV												
19...	1200	ENVIRONMENTAL	469	9.4	93	8.1	357	13.1	200	39.2	24.2	.99
DEC												
04...	1520	ENVIRONMENTAL	1820	9.9	94	8.0	358	12.0	--	--	--	--
JAN												
28...	0930	ENVIRONMENTAL	1630	11.1	94	7.8	356	6.8	180	35.8	21.8	.96
28...	0935	BLANK	--	--	--	--	--	--	--	.02	<.008	<.10
FEB												
13...	1050	ENVIRONMENTAL	2100	10.7	88	8.0	302	6.7	--	--	--	--
MAR												
26...	1347	ENVIRONMENTAL	8780	10.9	93	8.2	242	7.8	--	--	--	--
APR												
09...	1010	ENVIRONMENTAL	2100	9.6	91	8.1	297	12.4	--	--	--	--
MAY												
20...	1450	ENVIRONMENTAL	26100	9.2	94	8.0	191	15.7	97	20.7	10.9	2.27
JUN												
11...	1325	ENVIRONMENTAL	1670	10.0	121	8.1	298	23.3	--	--	--	--
JUL												
16...	1215	ENVIRONMENTAL	729	7.0	86	7.9	318	24.8	170	33.4	20.2	1.62
16...	1216	BLANK	--	--	--	--	--	--	--	E.01	<.008	<.10
AUG												
12...	1010	ENVIRONMENTAL	547	6.9	85	8.0	331	24.3	--	--	--	--
12...	1011	REPLICATE	--	--	--	--	--	--	--	--	--	--
SEP												
03...	0950	ENVIRONMENTAL	598	6.6	81	7.8	339	24.4	--	--	--	--

## GASCONADE RIVER BASIN

06930800 GASCONADE RIVER ABOVE JEROME, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 22...	--	169	169	206	0	--	--	--	<10	--	<.04	.15	.06
NOV 19...	3.75	176	176	215	0	6.75	.1	5.5	12	206	<.04	.13	.06
DEC 04...	--	180	182	222	0	--	--	--	34	--	<.04	.23	.49
JAN 28...	3.10	167	169	206	0	8.61	<.1	8.0	<10	194	<.04	.12	.68
28...	.32	--	--	--	--	.48	<.1	.3	<10	<10	<.04	<.10	<.05
FEB 13...	--	136	136	166	0	--	--	--	<10	--	<.04	.13	E1.33
MAR 26...	--	128	130	158	0	--	--	--	54	--	<.04	.44	.71
APR 09...	--	141	140	171	0	--	--	--	<10	--	<.04	.16	.38
MAY 20...	2.45	112	108	131	0	3.82	<.1	4.6	69	125	.06	.55	.29
JUN 11...	--	146	146	178	0	--	--	--	<10	--	<.04	.15	.21
JUL 16...	2.78	158	159	194	0	5.07	<.1	4.4	10	170	<.04	.12	.16
16...	<.09	--	--	--	--	<.30	<.1	<.1	--	<10	<.04	<.10	<.05
AUG 12...	--	163	166	202	0	--	--	--	<10	--	<.04	.14	.15
12...	--	--	--	--	--	--	--	--	<10	--	<.04	.14	.15
SEP 03...	--	165	167	204	0	--	--	--	<10	--	<.04	.15	.11
DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 22...	<.008	<.06	<.02	<.06	K3	K3	K8	--	--	--	--	--	--
NOV 19...	<.008	<.06	<.02	<.06	K4	K14	K3	13	36	.3	<.04	<.1	<6
DEC 04...	E.004	<.06	<.02	E.03	28	37	42	--	--	--	--	--	--
JAN 28...	<.008	<.06	<.02	<.06	<1	K3	K7	34	79	.3	<.04	<.1	8
28...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	<.1	<6
FEB 13...	<.008	<.06	E.01	<.06	K2	K8	K5	--	--	--	--	--	--
MAR 26...	.009	<.06	E.01	.07	480	420	212	--	--	--	--	--	--
APR 09...	<.008	<.06	<.02	<.06	K8	22	21	--	--	--	--	--	--
MAY 20...	.035	.07	.03	.13	370	600	1550	201	556	.4	<.04	<.1	<6
JUN 11...	<.008	<.06	<.02	<.06	K2	K11	K10	--	--	--	--	--	--
JUL 16...	<.008	<.06	E.01	<.06	K1	K6	185	1	59	.5	<.04	E.1	<6
16...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	E.1	<6
AUG 12...	<.008	<.06	<.02	<.06	K8	36	K6	--	--	--	--	--	--
12...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
SEP 03...	E.004	<.06	<.02	<.06	K4	K8	K1270	--	--	--	--	--	--

06930800 GASCONADE RIVER ABOVE JEROME, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 22...	--	--	--	--	--	--	--	--
NOV 19...	17	E.04	<1	8.1	<.01	<.3	--	4
DEC 04...	--	--	--	--	--	--	--	--
JAN 28...	17	<.08	<1	5.0	<.01	<.3	--	3
28...	<10	<.08	<1	<2.0	<.01	<.3	2	<1
FEB 13...	--	--	--	--	--	--	--	--
MAR 26...	--	--	--	--	--	--	--	--
APR 09...	--	--	--	--	--	--	--	--
MAY 20...	136	.73	3	12.0	E.01	<.3	--	11
JUN 11...	--	--	--	--	--	--	--	--
JUL 16...	<10	<.08	M	7.2	<.01	<.3	<1	1
16...	<10	<.08	<1	<2.0	<.01	E.2	<1	<1
AUG 12...	--	--	--	--	--	--	--	--
12...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## GASCONADE RIVER BASIN

06932000 LITTLE PINEY CREEK AT NEWBURG, MO

LOCATION.--Lat 37°54'35", long 91°54'12", in SW ¼ SE ¼ sec.22, T.37 N., R.9 W., Phelps County, Hydrologic Unit 10290203, on downstream side of bridge on State Highway P and T at Newburg, and 2 mi upstream from Mill Creek.

DRAINAGE AREA.--200 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1928 to current year.

GAGE.--Water-stage recorder. Datum of gage is 693.40 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1951, all gages at datum 3.0 ft higher. Prior to Nov. 21, 1963, nonrecording gage at site 100 ft downstream; Nov. 21, 1963 to May 9, 1966, nonrecording gage at present site.

REMARKS.--Records good. U.S.G.S satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 16.7 ft, Aug. 20, 1915, from floodmark, present datum; discharge, 30,000 ft<sup>3</sup>/s, from rating curve based on discharge measurements made in 1935 and extended above 25,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	35	38	135	78	1080	69	166	371	229	104	68	64
2	35	44	105	74	466	447	159	338	208	117	68	64
3	34	41	89	71	334	327	145	317	189	121	65	62
4	35	38	79	71	254	224	136	292	178	116	64	61
5	50	37	72	69	210	196	129	266	181	107	63	61
6	45	39	67	69	182	197	124	255	162	103	64	60
7	39	40	63	65	162	177	121	786	151	99	63	60
8	37	40	59	64	147	162	147	4570	143	97	61	60
9	36	39	55	64	136	200	166	2220	143	91	60	59
10	56	38	52	63	127	182	154	1010	150	90	61	59
11	55	38	50	60	116	171	145	726	149	91	64	59
12	52	38	66	59	110	176	140	2120	144	90	66	58
13	48	38	121	58	105	165	135	5590	302	85	113	57
14	48	38	110	57	100	156	135	1520	199	85	96	58
15	46	38	102	55	97	158	133	987	172	84	76	59
16	50	38	453	54	92	178	130	1120	155	83	72	59
17	45	37	975	53	89	166	134	6980	145	82	71	64
18	43	37	447	53	85	154	128	3420	139	81	191	62
19	41	36	280	55	90	381	1590	1640	134	81	102	66
20	41	35	207	53	93	519	3110	1240	128	80	186	96
21	41	35	173	53	87	323	981	1020	124	78	93	70
22	40	36	155	51	83	247	588	857	122	77	81	63
23	68	37	137	54	81	215	425	735	119	73	80	60
24	128	103	123	66	78	196	351	657	117	73	79	59
25	59	76	113	66	78	704	362	574	117	73	75	59
26	48	61	107	65	74	430	428	483	121	72	71	59
27	43	53	101	63	72	313	400	421	114	71	69	60
28	41	58	96	61	70	262	446	366	111	70	67	58
29	40	114	91	62	---	230	474	322	109	70	66	58
30	39	257	85	259	---	200	409	281	107	70	66	56
31	38	---	81	1760	---	180	---	253	---	70	65	---
MEAN	47.0	53.2	156	123	168	248	403	1346	152	86.6	80.2	61.7
MAX	128	257	975	1760	1080	704	3110	6980	302	121	191	96
MIN	34	35	50	51	70	69	121	253	107	70	60	56
IN.	0.27	0.30	0.90	0.71	0.87	1.43	2.25	7.76	0.85	0.50	0.46	0.34

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1929 - 2002, BY WATER YEAR (WY)

	MEAN	97.3	138	151	151	179	236	271	276	200	107	82.3	86.8
MAX	913	694	1300	770	678	822	1335	1346	1545	684	493	706	
(WY)	1950	1994	1983	1950	1985	1945	1945	2002	1935	1998	1946	1993	
MIN	26.9	33.1	35.7	34.9	35.6	42.8	42.0	43.7	32.2	27.6	27.6	28.1	
(WY)	1957	1957	1956	1956	1934	1956	1956	1932	1934	1934	1936	1954	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1929 - 2002
ANNUAL MEAN	116	245	164
HIGHEST ANNUAL MEAN			391
LOWEST ANNUAL MEAN			47.0
HIGHEST DAILY MEAN	3520	Apr 4	19600
LOWEST DAILY MEAN	34	Sep 4	24
ANNUAL SEVEN-DAY MINIMUM	35	Sep 1	36
MAXIMUM PEAK FLOW	---	14000	Apr 19
MAXIMUM PEAK STAGE	---	13.44	Apr 19
INSTANTANEOUS LOW FLOW	---	34	Oct 1-5
ANNUAL RUNOFF (INCHES)	7.91	16.65	11.15
10 PERCENT EXCEEDS	173	429	286
50 PERCENT EXCEEDS	74	90	87
90 PERCENT EXCEEDS	37	41	43

## 06933500 GASCONADE RIVER AT JEROME, MO

LOCATION.--Lat 37°55'47", long 91°58'38", in NE ¼ NE ¼ SE ¼ sec.13, T.37 N., R.10 W., Phelps County, Hydrologic Unit 10290203, on left bank at Jerome, 0.5 mi downstream from Little Piney Creek, and at mile 107.

DRAINAGE AREA.--2,840 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1903 to July 1906, January 1923 to current year. April 1903 to July 1906 published as "at Arlington". October to December 1922 monthly discharge only, published in WSP 1310. Gage-height records collected intermittently in the vicinity 1885-1926 and at same site since 1938 are contained in reports of the National Weather Service.

REVISED RECORDS.--WSP 172: 1904. WSP 566: Drainage area. WSP 1340: 1903-04, 1928(M).

GAGE.--Water-stage recorder. Datum of gage is 657.64 ft above National Geodetic Vertical Datum of 1929. Prior to July 26, 1904, nonrecording gage at site 0.8 mi downstream at different datum; July 26, 1904, to July 21, 1906, nonrecording gage at site 0.5 mi upstream from present site at datum about 0.85 ft higher than present gage; Jan. 3, 1923, to Sept. 29, 1928, nonrecording gage at site 400 ft downstream from present site at datum 0.14 ft lower than present datum; Sept. 30, 1928, to Jan. 17, 1939, nonrecording gage at present site and datum.

REMARKS.--Records good. National Weather Service gage-height and U.S.G.S. satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Jan. 6, 1897, reached a stage of about 29.0 ft, discharge, 120,000 ft<sup>3</sup>/s. A stage of 28.6 ft was reached on Aug. 20 and 22, 1915, discharge, 114,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	384	515	1560	1230	17200	1210	3630	3540	2560	844	635	649
2	379	528	1810	1130	22600	2270	3250	3460	2380	822	618	618
3	376	530	1750	1040	17700	3290	2870	3160	2210	882	602	594
4	375	529	1840	968	8550	4510	2570	2850	2080	866	592	571
5	475	527	1580	924	6100	4860	2340	2570	2100	818	585	553
6	484	523	1360	921	4850	4160	2200	2360	2050	798	567	533
7	456	519	1190	881	4050	3720	2090	3620	2010	778	553	520
8	439	512	1070	836	3450	3490	2090	16800	1850	766	556	517
9	426	509	974	812	3030	3400	3530	39400	1790	748	559	518
10	581	500	902	795	2730	3700	6220	47000	1740	734	545	494
11	750	493	835	768	2440	4270	6250	43400	1680	741	548	483
12	1040	489	865	749	2250	3980	4810	21100	1630	744	546	471
13	737	484	1120	732	2090	3960	4000	32400	2390	773	665	460
14	635	482	1160	720	1920	3770	3810	37000	1890	747	657	453
15	591	479	1350	698	1760	3500	5850	25400	1990	748	617	454
16	e560	475	2910	681	1630	3300	5450	11800	1920	727	671	455
17	535	469	7980	672	1500	3520	4630	20000	1750	701	725	484
18	523	465	16800	662	1400	3530	4250	34800	1580	712	823	483
19	517	465	16000	671	1360	3890	5760	34500	1440	739	771	489
20	515	457	10400	657	1360	7440	14800	25400	1330	722	861	548
21	511	452	6040	654	1330	13000	7780	11200	1250	870	753	539
22	507	447	4540	645	1420	11900	6180	8050	1170	973	699	535
23	527	478	3620	645	1480	7570	6520	6550	1090	924	693	535
24	1050	712	3010	690	1530	5830	5340	5710	1050	964	681	525
25	628	725	2570	718	1480	6350	4880	5280	1000	910	689	505
26	541	1190	2280	1030	1410	8540	4600	4590	1010	e971	665	539
27	531	966	2030	1250	1330	9370	4200	4060	949	e890	631	560
28	526	923	1790	1610	1260	7190	4040	3610	911	e800	618	553
29	520	1160	1600	1610	---	5810	4290	3250	890	710	614	533
30	517	1720	1440	2010	---	4910	4000	3020	865	683	646	516
31	513	---	1330	6670	---	4210	---	2770	---	661	659	---
MEAN	553	624	3345	1099	4258	5176	4741	15120	1618	799	647	523
MAX	1050	1720	16800	6670	22600	13000	14800	47000	2560	973	861	649
MIN	375	447	835	645	1260	1210	2090	2360	865	661	545	453
IN.	0.22	0.25	1.36	0.45	1.56	2.10	1.86	6.14	0.64	0.32	0.26	0.21

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	1372	2307	2474	2406	3012	4045	4622	4439	3013	1526	1165	1257
MEAN	1372	2307	2474	2406	3012	4045	4622	4439	3013	1526	1165	1257
MAX	10390	10400	17740	10980	11540	13110	20450	15390	18500	10730	9244	12580
(WY)	1950	1994	1983	1950	1985	1945	1945	1990	1935	1951	1927	1993
MIN	289	368	392	368	491	597	504	532	518	339	324	293
(WY)	1957	1957	1956	1956	1964	1956	1956	2000	1934	1934	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	1410		3214		2624	
HIGHEST ANNUAL MEAN					6491	
LOWEST ANNUAL MEAN					544	
HIGHEST DAILY MEAN	28000	Feb 26	47000	May 10	121000	Dec 5 1982
LOWEST DAILY MEAN	375	Oct 4	375	Oct 4	259	Sep 21 1956
ANNUAL SEVEN-DAY MINIMUM	380	Sep 1	418	Oct 1	266	Sep 16 1956
MAXIMUM PEAK FLOW	---		51700	May 10	136000	Dec 5 1982
MAXIMUM PEAK STAGE	---		21.14	May 10	31.34	Dec 5 1982
INSTANTANEOUS LOW FLOW	---		371	Oct 4,5	254	Sep 21 1956
ANNUAL RUNOFF (INCHES)	6.74		15.37		12.55	
10 PERCENT EXCEEDS	2170		6290		5470	
50 PERCENT EXCEEDS	799		1040		1230	
90 PERCENT EXCEEDS	431		510		514	

e Estimated

## GASCONADE RIVER BASIN

06934000 GASCONADE RIVER NEAR RICH FOUNTAIN, MO

LOCATION.--Lat 38°23'20", long 91°49'15", in SE ¼ sec.16, T.41 N., R.8 W., Osage County, Hydrologic Unit 10290203, on downstream side of State Highway 89 bridge, 100 ft downstream from Brush Creek Slough, 800 ft upstream from Swan Creek, and 4 mi east of Rich Fountain.

DRAINAGE AREA.--3,180 mi<sup>2</sup> (by U.S. Army Corps of Engineers).

PERIOD OF RECORD.--Nov. 1, 1921 to Sept. 30, 1959, Oct. 1, 1986 to current year. Annual peaks only for water years 1959 to 1986.

GAGE.--Water-stage recorder. Datum of gage 553.70 ft above National Geodetic Vertical Datum of 1929. From Oct. 10, 1921, to Sept. 13, 1932, chain gage on former bridge, 50 ft downstream; Sept. 14, 1932, to Mar. 9, 1934, wire-weight gage on former bridge; Mar. 10, 1934, to Aug. 26, 1956, water-stage recorder on former bridge; Aug. 26, 1956, to May 11, 1966, gage readings were obtained by measuring from a reference point on present bridge; May 11, 1966, to Oct. 31, 1986, Type-A wire-weight gage on present bridge. All gages have been maintained at present datum.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	432	565	2600	1520	13700	1480	4600	3840	3060	1020	761	745
2	430	599	2040	1410	19800	2590	4060	3450	2830	1010	734	736
3	424	613	2070	1340	22100	4550	3650	3330	2630	1000	718	714
4	423	614	1990	1280	15100	4450	3240	3010	2450	1060	703	680
5	496	596	2000	1170	7900	5370	2940	2710	2540	1040	681	654
6	518	580	1780	1130	6160	5410	2690	2460	2490	964	658	631
7	523	567	1580	1110	5110	4670	2500	2960	2350	925	643	604
8	496	558	1410	1070	4350	4220	2490	13600	2230	894	616	588
9	481	548	1270	1020	3780	4160	2620	27100	2090	864	613	583
10	861	540	1160	997	3360	4060	4680	39000	2080	847	620	586
11	834	525	1070	970	3010	4570	6950	47900	2210	830	606	566
12	877	522	1120	937	2710	4650	6070	45400	2990	846	611	551
13	1200	518	1980	912	2480	4420	4950	34700	2360	837	687	540
14	961	516	1970	888	2270	4420	4350	35100	2730	861	778	534
15	820	509	1820	867	2100	4140	4450	37400	2110	815	773	532
16	779	504	3470	844	1960	4170	6360	26200	2160	821	707	535
17	744	502	9000	824	1830	3850	5260	20200	2040	802	738	549
18	686	497	11700	811	1720	4040	4200	28600	1880	778	3670	558
19	641	497	16800	811	1640	4330	4280	35000	1730	974	2100	567
20	611	490	14900	804	1640	6370	17000	36300	1620	850	2020	596
21	596	486	8230	789	1620	10300	16400	24600	1520	828	1190	613
22	583	477	5520	778	1580	13000	7840	10500	1440	928	992	607
23	634	473	4330	772	1660	10300	6670	7970	1360	1140	924	596
24	1480	1240	3590	792	1710	7280	6210	7080	1290	1070	878	596
25	1820	1360	3060	832	1730	6580	5000	6230	1240	1100	847	591
26	1040	1040	2670	866	1690	7790	4810	5580	1200	1040	828	575
27	791	1320	2380	1160	1610	9610	4680	4850	1200	1090	803	588
28	694	1190	2150	1410	1530	9020	4780	4330	1150	983	761	624
29	655	1190	1950	1710	---	7370	4280	4060	1100	890	731	618
30	614	3140	1790	2600	---	6150	4280	3690	1060	830	718	606
31	586	---	1640	9970	---	5300	---	3340	---	793	733	---
MEAN	733	759	3840	1368	4852	5762	5410	17110	1971	927	930	602
MAX	1820	3140	16800	9970	22100	13000	17000	47900	3060	1140	3670	745
MIN	423	473	1070	772	1530	1480	2490	2460	1060	778	606	532
IN.	0.27	0.27	1.39	0.50	1.59	2.09	1.90	6.21	0.69	0.34	0.34	0.21

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	1638	2449	2505	2842	3305	4551	5585	5424	3736	1788	1345	1387
MAX	12060	12230	12750	12700	7637	14640	22720	18300	19810	12630	9365	15330	
(WY)	1950	1994	1988	1950	1949	1945	1945	1990	1935	1951	1927	1993	
MIN	288	394	403	374	558	620	531	670	647	385	334	295	
(WY)	1957	1957	1956	1956	1954	1956	1956	2000	1934	1954	1936	1954	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	1686		3696		3042	
HIGHEST ANNUAL MEAN					6560	
LOWEST ANNUAL MEAN					629	
HIGHEST DAILY MEAN	27300	Feb 27	47900	May 11	101000	Sep 28 1993
LOWEST DAILY MEAN	395	Sep 1	423	Oct 4	275	Sep 19 1954
ANNUAL SEVEN-DAY MINIMUM	403	Aug 29	464	Oct 1	279	Oct 6 1956
MAXIMUM PEAK FLOW	---		49500	May 11	134000	Dec 6 1982
MAXIMUM PEAK STAGE	---		22.17	May 11	33.27	Dec 6 1982
INSTANTANEOUS LOW FLOW	---		414	Oct 4	275	Sep 19 1954
ANNUAL RUNOFF (INCHES)	7.20		15.78		13.00	
10 PERCENT EXCEEDS	2860		7540		6420	
50 PERCENT EXCEEDS	988		1360		1460	
90 PERCENT EXCEEDS	475		572		562	



06934500 MISSOURI RIVER AT HERMANN, MO

LOCATION.--Lat 38°42'36", long 91°26'21", in SW ¼ sec.25, T.46 N., R.5 W., Montgomery County, Hydrologic Unit 10300200, on downstream side of third pier from right abutment of bridge on State Highway 19 at Hermann, and at mile 97.9.

DRAINAGE AREA.--522,500 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1897 to current year. Prior to August 1928 monthly discharge only published in WSP 1310. Gage-height records 1873-99 collected at site 480 ft downstream are contained in reports of Missouri River Commission; since 1900 in reports of the National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area, WDR MO-98-1: Extreme outside period of record.

GAGE.--Water-stage recorder and nonrecording gage. Datum of gage is 481.56 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 26, 1930, nonrecording gage at site 480 ft downstream at datum 0.07 ft lower; Sept. 26, 1930, to Mar. 27, 1932, nonrecording gage; Mar. 28, 1932, to June 12, 1945, water-stage recorder; June 13, 1945, to Apr. 2, 1946, May 13 to Sept. 30, 1978, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. Some regulation from many upstream reservoirs. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1844 reached a stage of 35.5 ft, discharge, about 700,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	57100	47100	52500	34900	119000	45200	48000	115000	109000	53900	40300	46200
2	55600	46100	50400	35700	104000	44800	45400	97500	108000	51700	42600	44200
3	54200	47000	47600	35000	92000	47500	46000	95800	106000	48700	42500	42800
4	54000	45800	46200	36400	83300	41700	50600	87500	105000	47400	39700	42000
5	56500	44200	45900	36600	71400	42900	50200	71500	104000	47200	37900	41700
6	57400	43700	44600	37900	61900	47300	49600	61400	104000	48900	36600	41300
7	61300	44800	41600	34200	53200	46600	47100	104000	105000	47800	35800	41300
8	60800	47000	39500	33000	51100	41200	45400	225000	105000	45900	35500	44500
9	54600	45600	37800	35300	48600	38500	47600	285000	105000	44700	35000	45500
10	61400	44400	36300	35000	47100	38200	49100	299000	103000	52000	34900	42700
11	81000	43700	35600	34900	38300	38300	49100	282000	98600	56600	35100	46700
12	76100	43600	36300	31100	37100	39400	54100	269000	113000	55400	35600	47900
13	68700	43200	40400	29900	42300	41400	57100	324000	153000	54700	37500	42000
14	62600	43300	40500	30000	45600	40500	53200	345000	146000	52200	39400	40200
15	52700	44100	40100	30500	46000	39300	50400	332000	130000	48600	41600	39500
16	53300	43400	41300	30400	46300	37500	52100	315000	114000	47800	39000	39300
17	66300	43100	54500	30100	44300	36400	54400	282000	109000	52300	38100	39600
18	69500	42700	57500	30500	38400	35600	51500	260000	107000	47800	41500	39900
19	75000	42400	56400	31400	37400	36600	49500	209000	100000	48200	59700	40700
20	68700	42100	56700	32700	43100	42500	66300	170000	94800	48800	57000	41400
21	58300	41800	58300	34000	44400	48000	90400	155000	92200	48300	55500	42200
22	51400	41900	51200	33300	48100	53700	90100	143000	90300	44300	49600	42000
23	48700	42400	42800	34500	54800	59000	94900	121000	88600	42800	50000	41000
24	47500	47500	39000	34100	53500	51500	104000	116000	86700	47900	51400	40000
25	48700	47200	37300	33900	44700	44500	83900	126000	82700	45900	51800	39500
26	49100	45200	37100	35700	40900	45900	70800	132000	79300	41300	49400	39700
27	48600	44700	37000	35100	42500	54300	72400	157000	79200	39500	48000	40000
28	48500	45600	37100	33400	45400	56900	102000	156000	78400	42500	56700	38900
29	47500	46500	37800	32200	---	54600	121000	140000	68600	44500	59800	38000
30	47300	50200	36800	33800	---	53000	128000	128000	57500	44400	52600	37700
31	50400	---	35500	75700	---	50900	---	115000	---	40200	48700	---
MEAN	57830	44680	43600	34880	54450	44960	65810	184500	100800	47810	44480	41610
MAX	81000	50200	58300	75700	119000	59000	128000	345000	153000	56600	59800	47900
MIN	47300	41800	35500	29900	37100	35600	45400	61400	57500	39500	34900	37700
IN.	0.13	0.10	0.10	0.08	0.11	0.10	0.14	0.41	0.21	0.11	0.10	0.09

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1958 - 2002<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	79440	79450	63400	50980	68980	97540	122100	123600	121400	101000	74830	76580
MAX	286700	174800	178900	129000	136800	267500	333400	313000	282300	376300	306600	243500	
(WY)	1987	1999	1983	1973	1982	1973	1995	1995	1993	1993	1993	1993	
MIN	36680	29400	17060	17350	19250	22810	45800	47710	46150	44010	39540	37800	
(WY)	1964	1991	1964	1963	1964	1964	1963	1989	1988	1988	1991	1963	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1958 - 2002 <sup>a</sup>
ANNUAL MEAN	87020	63860	87400
HIGHEST ANNUAL MEAN			181800
LOWEST ANNUAL MEAN			44980
HIGHEST DAILY MEAN	346000	Jun 8	739000
LOWEST DAILY MEAN	25500	Jan 1	6210
ANNUAL SEVEN-DAY MINIMUM	26300	Jan 1	7400
MAXIMUM PEAK FLOW	---		750000
MAXIMUM PEAK STAGE	---		36.97
INSTANTANEOUS LOW FLOW	---		602
ANNUAL RUNOFF (INCHES)	2.25		2.27
10 PERCENT EXCEEDS	154000		164000
50 PERCENT EXCEEDS	69700		67600
90 PERCENT EXCEEDS	37100		36800

<sup>a</sup> Post-regulation period.

## MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued  
(National Stream-Quality Accounting Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1969 to current year.

## PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1996.

WATER TEMPERATURE: October 1974 to September 1996.

DISSOLVED OXYGEN: June 1984 to September 1984, April 1985 to September 1985, April 1986 to September 1986.

INSTRUMENTATION.--Water-quality monitor, June 1984 to September 1984, April 1985 to September 1985, April 1986 to September 1986.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: (water years 1976 to 1996): Maximum daily, 2,150 microsiemens per centimeter, Dec. 9, 1978; minimum daily, 205 microsiemens per centimeter, Apr. 16, 1979.

WATER TEMPERATURE: (water years 1976 to 1996): Maximum daily, 32.5 °C, July 31, 1987; minimum daily, 0.0 °C on many days during winter period.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	TURBID- ITY LAB HACH 2100AN (NTU) (99872)	UV ABSORB- ANCE 254 NM, WTR FLT (units /cm) (50624)	UV ABSORB- ANCE 280 NM, WTR FLT (units /cm) (61726)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (mg/L) (00300)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	
OCT												
16...	1025	ENVIRONMENTAL	51600	32	.086	.062	11.3	113	8.2	729	15.1	240
DEC												
04...	1030	ENVIRONMENTAL	46300	26	.071	.051	10.6	93	8.1	696	9.1	230
JAN												
25...	1205	ENVIRONMENTAL	33800	14	.060	.040	12.8	101	8.1	664	4.3	250
FEB												
22...	1115	ENVIRONMENTAL	47400	27	.068	.046	12.9	107	8.2	613	6.3	220
MAR												
13...	1020	ENVIRONMENTAL	41600	80	.077	.053	12.2	102	8.1	615	6.9	230
APR												
02...	1125	ENVIRONMENTAL	45200	33	.068	.049	11.3	103	8.3	658	10.1	220
02...	1135	REPLICATE	--	32	.068	.049	--	--	--	--	--	230
22...	1220	ENVIRONMENTAL	89900	120	.178	.135	7.3	78	8.0	456	17.6	170
24...	1055	ENVIRONMENTAL	106000	470	.153	.113	6.4	68	7.9	502	17.1	180
MAY												
07...	0955	ENVIRONMENTAL	88900	170	.125	.092	8.0	86	8.1	560	18.2	200
10...	1110	ENVIRONMENTAL	304000	700	.214	.164	5.2	55	7.8	292	17.8	110
22...	1115	ENVIRONMENTAL	145000	140	.127	.094	7.2	77	8.1	375	17.4	160
JUN												
04...	1015	ENVIRONMENTAL	105000	66	.116	.084	7.3	89	8.1	476	24.3	180
JUL												
09...	1010	ENVIRONMENTAL	44400	24	.080	.057	7.7	105	8.3	711	30.3	230
09...	1018	BLANK	--	--	--	--	--	--	--	--	--	--
AUG												
13...	1030	ENVIRONMENTAL	37500	19	.071	.050	6.2	81	8.4	773	27.5	240
13...	1038	BLANK	--	--	<.004	<.004	--	--	--	--	--	--
SEP												
10...	0940	ENVIRONMENTAL	42500	24	.080	.057	7.2	93	8.2	715	27.6	230
10...	0950	REPLICATE	--	22	.080	.056	--	--	--	--	--	230

06934500 MISSOURI RIVER AT HERMANN, MO--Continued  
(National Stream-Quality Accounting Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ALKA- LINITY WAT DIS FIX END FIELD (mg/L as CaCO <sub>3</sub> ) (39036)	ALKA- LINITY WAT DIS TOT IT FIELD (mg/L as CaCO <sub>3</sub> ) (39086)	BICAR- BONATE WATER DIS IT FIELD (mg/L as HCO <sub>3</sub> ) (00453)	CAR- BONATE WATER DIS IT FIELD (mg/L as CO <sub>3</sub> ) (00452)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SILICA, DIS- SOLVED (mg/L as SiO <sub>2</sub> ) (00955)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)
OCT 16...	60.2	21.1	7.15	59.5	159	161	197	0	22.9	.4	9.11	174	486
DEC 04...	58.3	21.4	5.52	57.7	169	169	206	0	23.2	.4	10.7	151	468
JAN 25...	65.6	21.0	5.60	49.1	187	190	232	0	28.9	.5	15.0	131	464
FEB 22...	58.1	17.9	4.78	39.8	168	169	206	0	24.5	.3	12.7	101	380
MAR 13...	59.6	19.2	4.88	39.7	182	182	222	0	24.0	.3	10.1	104	402
APR 02...	56.9	19.8	5.24	47.2	170	170	195	6	23.4	.4	11.8	136	441
02...	58.4	20.1	5.28	50.2	--	--	--	--	23.0	.4	12.2	129	423
22...	43.4	15.9	4.66	31.8	132	132	161	0	15.6	.3	8.73	85.3	298
24...	45.6	15.3	4.90	34.5	129	129	158	0	17.4	.3	8.86	91.5	315
MAY 07...	51.8	16.9	4.86	37.4	154	151	185	0	18.1	.2	7.27	109	363
10...	31.1	8.83	4.24	12.5	105	104	127	0	8.69	.2	7.29	34.5	176
22...	41.6	13.0	4.05	17.5	120	121	147	0	10.5	.2	8.00	52.7	240
JUN 04...	47.6	13.8	4.37	26.8	135	134	165	0	14.7	.3	6.53	77.5	298
JUL 09...	57.8	20.3	5.78	54.1	176	175	197	8	21.4	.4	5.53	152	441
09...	<.01	<.008	--	<.09	--	--	--	--	--	--	<.13	--	--
AUG 13...	58.0	22.6	5.72	73.1	172	173	184	13	22.0	.5	3.38	188	497
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	56.4	21.5	6.01	61.6	157	158	193	0	19.0	.5	6.84	166	462
10...	56.3	21.4	6.05	61.3	--	--	--	--	18.8	.5	6.83	165	457

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (mg/L as N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	NITRO- GEN,PAR TICULATE WAT FLT SUSP (mg/L as N) (49570)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON, INORG + ORGANIC PARTIC. TOTAL (mg/L as C) (00694)	CARBON, INOR- GANIC, PARTIC. TOTAL (mg/L as C) (00688)	CARBON, ORGANIC DIS- SOLVED (mg/L as C) (00681)	CARBON, ORGANIC PARTIC- ULATE TOTAL (mg/L as C) (00689)
OCT													
16...	<.04	.27	.76	.45	E.004	.47	.103	.090	.23	3.8	<.1	4.3	3.8
DEC													
04...	<.04	.30	.48	.84	E.005	.17	.086	.079	.168	2.5	<.1	3.0	2.5
JAN													
25...	.06	.13	.50	1.55	.008	.18	.100	.092	.150	1.6	<.1	3.1	1.6
FEB													
22...	<.04	.27	.43	1.24	.009	.05	.084	.071	.158	.5	<.1	3.0	.4
MAR													
13...	<.04	.23	.65	1.06	.022	.36	.059	.034	.23	3.4	<.1	3.9	3.4
APR													
02...	<.04	.22	.59	1.36	E.007	.35	.091	.080	.189	2.6	<.1	3.1	2.5
02...	<.04	.21	.55	1.27	E.005	.24	.087	.077	.177	2.4	<.1	3.1	2.3
22...	E.04	.45	1.2	.64	.014	.58	.097	.079	.32	5.8	<.1	5.9	5.7
24...	.04	.50	1.9	1.16	.041	.90	.084	.069	.83	8.3	<.1	5.4	8.2
MAY													
07...	<.04	.35	1.2	.94	.011	.64	.082	.066	.36	6.6	<.1	4.6	6.5
10...	E.03	.53	3.0	1.15	.058	1.36	.085	.068	1.11	12.1	.4	6.5	11.7
22...	<.04	.37	1.0	1.40	.030	.23	.078	.064	.36	4.1	<.1	4.3	4.1
JUN													
04...	<.04	.30	.74	1.07	.010	.19	.073	.057	.21	3.1	<.1	4.0	3.1
JUL													
09...	<.04	.24	.60	.49	.009	.32	.102	.090	.182	2.1	<.1	3.2	2.0
09...	<.015	--	--	<.013	<.002	--	--	<.007	--	--	--	--	--
AUG													
13...	<.04	.21	.57	<.05	<.008	.34	.072	.057	.141	2.0	<.1	3.3	2.0
13...	--	--	--	--	--	.07	--	--	--	<.1	<.1	E.2	<.1
SEP													
10...	<.04	.25	.66	.36	E.005	.42	.105	.088	.18	3.3	<.1	3.7	3.3
10...	<.04	.24	.70	.36	E.005	.59	.105	.089	.196	4.3	<.1	3.5	4.3

## MISSOURI RIVER MAIN STEM

06934500 MISSOURI RIVER AT HERMANN, MO--Continued  
(National Stream-Quality Accounting Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHEO- PHYTIN A, PHYTO- (µg/L) (62360)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (µg/L) (70953)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ANTI- MONY, DIS- SOLVED (µg/L as Sb) (01095)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BARIUM, DIS- SOLVED (µg/L as Ba) (01005)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	BORON, DIS- SOLVED (µg/L as B) (01020)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)
OCT 16...	31.1	200	K230	350	29.0	--	--	3.1	--	--	107	--	--
DEC 04...	7.9	110	210	56	10.3	4	.25	2.3	83	<.06	97	E.03	<.8
JAN 25...	3.5	K17	57	K18	22.4	--	--	3.0	--	--	98	--	--
FEB 22...	5.5	42	K1	K25	14.5	--	--	2.1	--	--	76	--	--
MAR 13...	6.5	K150	76	68	26.0	--	--	1.9	--	--	83	--	--
APR 02...	9.3	K22	80	LA	29.9	1	.12	2.5	89	<.06	76	.04	<.8
02...	7.9	K14	87	LA	27.1	2	.14	2.7	91	<.06	79	.04	<.8
22...	13.9	560	4800	940	19.2	--	--	2.1	--	--	59	--	--
24...	15.2	780	2400	1550	16.7	--	--	2.0	--	--	64	--	--
MAY 07...	12.3	1400	2500	5400	25.2	--	--	2.1	--	--	61	--	--
10...	12.8	3800	4200	4000	6.8	--	--	1.4	--	--	33	--	--
22...	5.5	720	K250	K420	6.4	--	--	1.6	--	--	42	--	--
JUN 04...	14.7	K40	K60	K43	23.8	2	.32	2.0	94	<.06	57	<.04	<.8
JUL 09...	31.4	25	26	K6	30.5	--	--	3.5	--	--	100	--	--
09...	--	--	--	--	--	<1	<.05	<.2	<1	<.06	<7	<.04	<.8
AUG 13...	26.7	24	31	37	55.0	--	--	3.3	--	--	130	--	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	26.5	23	45	39	48.6	3	.60	3.4	89	<.06	115	E.03	<.8
10...	27.6	--	--	--	49.1	3	.61	3.5	89	<.06	114	E.03	<.8

DATE	COBALT, DIS- SOLVED (µg/L as Co) (01035)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LITHIUM DIS- SOLVED (µg/L as Li) (01130)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MOLYB- DENUM, DIS- SOLVED (µg/L as Mo) (01060)	NICKEL, DIS- SOLVED (µg/L as Ni) (01065)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	SILVER, DIS- SOLVED (µg/L as Ag) (01075)	STRON- TIUM, DIS- SOLVED (µg/L as Sr) (01080)	VANA- DIUM, DIS- SOLVED (µg/L as V) (01085)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)
OCT 16...	--	--	<10	--	41.1	--	--	--	2.7	--	464	3.5	--
DEC 04...	.18	1.7	<10	<.08	38.5	4.2	3.1	1.21	1.7	<1	485	2.3	7
JAN 25...	--	--	<10	--	31.1	--	--	--	2.9	--	465	4.4	--
FEB 22...	--	--	<10	--	24.2	--	--	--	.8	--	381	2.7	--
MAR 13...	--	--	<10	--	27.7	--	--	--	2.4	--	374	.8	--
APR 02...	.27	1.9	<10	E.05	28.9	3.8	2.9	2.00	2.4	<1	415	3.0	1
02...	.26	1.8	<10	<.08	30.6	4.2	3.0	2.17	2.6	<1	437	3.1	1
22...	--	--	15	--	18.0	--	--	--	1.7	--	263	2.9	--
24...	--	--	E5	--	20.3	--	--	--	1.9	--	295	3.2	--
MAY 07...	--	--	E6	--	22.3	--	--	--	1.5	--	337	2.8	--
10...	--	--	27	--	6.1	--	--	--	.6	--	153	2.6	--
22...	--	--	E6	--	9.9	--	--	--	1.3	--	198	2.4	--
JUN 04...	.16	1.8	<10	<.08	17.7	.7	2.1	2.19	1.4	<1	260	4.0	<1
JUL 09...	--	--	<10	--	34.8	--	--	--	2.6	--	425	4.1	--
09...	<.02	<.2	<10	<.08	<.3	<.1	<.2	<.06	<.3	<1	<.08	<.2	<1
AUG 13...	--	--	<10	--	44.8	--	--	--	2.1	--	504	4.4	--
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	.18	2.0	<10	<.08	38.7	.4	4.3	3.36	1.7	<1	448	4.6	1
10...	.19	2.0	<10	<.08	38.3	.4	4.3	3.55	1.9	<1	450	4.8	1

06934500 MISSOURI RIVER AT HERMANN, MO--Continued  
(National Stream-Quality Accounting Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO-CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA-CHLOR, WATER, DISS, REC (µg/L) (46342)	ALPHA-BHC, DIS-SOLVED (µg/L) (34253)	ATRA-ZINE, WATER, DISS, REC (µg/L) (39632)	BEN-FLUR-ALIN WAT FLD 0.7 µ GF, REC (µg/L) (82673)	BUTYL-ATE, WATER, DISS, REC (µg/L) (04028)	CAR-BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO-FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR-PYRIFOS, DIS-SOLVED (µg/L) (38933)	CYANA-ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA-ZINE, WATER, DISS, REC (µg/L) (04040)
OCT 16...	<.002	.015	<.002	<.005	.164	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.030
DEC 04...	<.002	.009	<.002	<.005	.065	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.010
JAN 25...	<.006	.017	E.004	<.005	.129	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.030
FEB 22...	<.006	<.010	<.004	<.005	.215	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.035
MAR 13...	<.006	.010	<.004	<.005	.099	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.017
APR 02...	<.006	<.006	<.004	<.005	.055	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.018
02...	<.006	<.006	<.004	<.005	.057	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.018
22...	<.006	.098	.042	<.005	.997	<.010	<.002	<.041	E.031	<.005	<.018	<.003	E.041
24...	<.006	1.53	.213	<.005	5.91	<.010	<.002	<.041	<.020	<.005	<.020	<.003	E.131
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	<.006	.892	.102	<.005	6.42	<.010	<.002	E.004	E.004	.005	E.016	<.003	E.202
22...	<.006	.539	.030	<.005	3.06	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.117
JUN 04...	<.006	.114	.051	<.005	1.91	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.155
JUL 09...	<.006	.026	.007	<.005	.424	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.068
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	<.006	E.005	<.004	<.005	.130	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.026
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<.006	.025	<.004	<.005	.186	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.034
10...	<.006	.023	<.004	<.005	.191	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.038
DATE	DI-AZINON, DIS-SOLVED (µg/L) (39572)	DI-ELDRIN, DIS-SOLVED (µg/L) (39381)	DISUL-FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL-ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO-PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS-SOLVED (µg/L) (39341)	LIN-URON WATER FLTRD 0.7µ GF, REC (µg/L) (82666)	MALA-THION, DIS-SOLVED (µg/L) (39532)	METHYL AZIN-PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA-THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO-LACHLOR WATER DISSOLV (µg/L) (39415)
OCT 16...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.044
DEC 04...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.030	<.050	<.006	.031
JAN 25...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	.007	.032
FEB 22...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.040	.040
MAR 13...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.032
APR 02...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.020
02...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.022
22...	.010	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.150
24...	.007	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	1.37
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	.014	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.030	.963
22...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.538
JUN 04...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.275
JUL 09...	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.020	.093
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	E.002	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.023
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.020	.032
10...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.032

06934500 MISSOURI RIVER AT HERMANN, MO--Continued  
(National Stream-Quality Accounting Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	METRI- BUZIN SENCOR WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)
OCT 16...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011
DEC 04...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011
JAN 25...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
FEB 22...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
MAR 13...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
APR 02...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
02...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
22...	.013	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
24...	.020	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
MAY 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	.017	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
22...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
JUN 04...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
JUL 09...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
09...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 13...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
13...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
10...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011

DATE	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	TER- BUTHYL- AZINE, WATER, DISS, REC (µg/L) (04022)	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)	URANIUM NATURAL DIS- SOLVED (µg/L as U) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 mm (70331)	SEDI- MENT, SUS- PENDEED (mg/L) (80154)
OCT 16...	<.02	<.011	<.02	<.034	<.02	--	<.005	<.002	<.009	--	62	137
DEC 04...	<.02	<.011	<.02	<.034	<.02	--	<.005	<.002	<.009	3.79	35	107
JAN 25...	<.02	.006	<.02	<.034	<.02	M	<.005	<.002	<.009	--	19	183
FEB 22...	<.02	.007	<.02	<.034	<.02	--	<.005	<.002	<.009	--	26	149
MAR 13...	<.02	.010	<.02	<.034	<.02	--	<.005	<.002	<.009	--	79	152
APR 02...	<.02	<.005	<.02	<.034	<.02	--	<.005	<.002	<.009	4.46	57	197
02...	<.02	.005	<.02	<.034	<.02	--	<.005	<.002	<.009	4.65	--	--
22...	<.02	.059	<.02	<.034	<.02	--	<.005	<.002	<.009	--	--	--
24...	<.02	.315	<.02	<.034	<.02	--	<.005	<.002	E.005	--	74	170
MAY 07...	--	--	--	--	--	--	--	--	--	--	92	383
10...	<.02	.286	E.01	<.034	<.02	--	<.005	<.002	E.003	--	90	1470
22...	<.02	.060	<.02	<.034	<.02	--	<.005	<.002	<.009	--	72	332
JUN 04...	<.02	.030	<.02	<.034	<.02	--	<.005	<.002	<.009	2.51	80	150
JUL 09...	<.02	.010	<.02	<.034	<.02	--	<.005	<.002	<.009	--	81	60
09...	--	--	--	--	--	--	--	--	--	<.02	--	--
AUG 13...	<.02	E.004	<.02	<.034	<.02	--	<.005	<.002	<.009	--	90	61
13...	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<.02	.009	<.02	<.034	<.02	--	<.005	<.002	<.009	3.75	67	82
10...	<.02	.008	<.02	<.034	<.02	--	<.005	<.002	<.009	3.77	70	78

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

LA--Laboratory accident.

06935755 BONHOMME CREEK NEAR ELLISVILLE, MO

LOCATION.--Lat 38°36'35", long 90°40'20", St. Louis County, Hydrologic Unit 10300200, on right downstream side of Rieger Road bridge, 0.14 mi southwest of State Road 109, 1.56 mi north of State Road 100 (Manchester Road), 1.25 mi west of St. Louis County Highway C, and 9.55 mi upstream of Missouri River.

DRAINAGE AREA.--4.44 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1997 to current year. Annual peaks only for 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 568.56 ft above National Geodetic Vertical Datum of 1929. Prior to September 1997, at datum of 570.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except estimated daily discharges and those below 0.5 ft<sup>3</sup>/s and above 500 ft<sup>3</sup>/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 23, 1973 reached a stage of 8.64 ft, former datum, discharge, 2,640 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.02	0.22	1.9	e0.70	15	0.72	1.7	2.1	0.41	0.17	0.18	0.09
2	0.02	0.36	1.4	e0.66	5.6	28	1.6	1.6	e0.40	0.19	0.18	0.08
3	0.00	0.30	0.85	e0.62	3.4	6.4	1.3	1.3	e0.39	1.9	0.18	0.08
4	0.09	0.27	0.70	e0.61	2.3	3.0	1.1	1.1	e0.38	1.1	0.19	0.07
5	3.5	0.26	0.64	e0.63	1.8	3.2	1.0	0.99	e1.6	3.5	0.23	0.08
6	1.5	0.14	0.64	0.75	1.7	2.6	0.99	21	e0.69	1.0	0.27	0.10
7	0.58	0.19	0.55	0.64	1.5	2.0	1.0	83	e0.54	0.17	0.40	0.09
8	0.37	0.16	0.51	0.69	1.2	1.7	8.4	72	e0.45	0.18	0.32	0.08
9	0.27	0.12	0.46	0.76	1.1	14	3.0	23	e0.38	0.20	0.24	0.07
10	19	0.10	0.40	0.66	1.1	3.4	1.8	6.6	e0.50	8.1	0.30	0.07
11	22	0.10	0.38	0.58	0.91	2.7	1.5	3.7	e5.4	1.2	0.30	0.06
12	4.1	0.13	5.6	0.58	0.87	2.2	1.4	104	36	1.00	0.29	0.06
13	0.50	0.15	2.6	0.57	0.77	1.9	1.3	26	5.0	0.48	0.52	0.09
14	0.43	0.14	4.9	0.58	0.74	1.7	1.2	5.3	1.5	0.30	0.53	0.05
15	3.2	0.18	1.5	0.54	0.75	10	1.1	2.4	1.2	0.24	0.21	0.05
16	4.1	0.17	61	0.44	0.68	4.9	1.1	5.4	0.87	0.23	0.16	0.04
17	0.31	0.27	71	0.36	0.64	2.8	1.1	37	0.63	0.24	0.12	0.38
18	0.18	0.18	5.5	0.43	0.60	2.2	0.88	6.7	0.50	0.21	2.4	0.48
19	0.14	0.25	2.8	0.52	3.5	9.4	10	3.5	0.62	0.21	0.64	38
20	0.13	0.13	1.9	0.49	1.9	7.5	20	2.4	0.49	0.22	0.26	4.2
21	0.13	0.13	2.5	0.48	1.1	3.6	18	1.5	0.44	0.21	0.41	0.75
22	0.13	0.14	4.8	0.52	0.91	2.6	5.9	1.1	0.36	0.27	0.22	0.30
23	0.19	0.18	1.6	0.58	0.87	2.3	3.5	0.93	0.32	0.42	0.23	0.21
24	34	37	1.3	0.91	0.86	2.2	3.8	1.1	0.26	0.26	0.25	0.19
25	2.1	2.5	1.0	0.59	0.89	30	2.2	0.86	0.25	0.21	0.20	0.18
26	0.96	1.9	1.0	0.50	0.85	11	1.7	0.62	0.29	0.19	0.15	0.17
27	0.44	1.4	1.1	0.50	0.71	6.5	17	0.52	0.25	0.20	0.13	0.21
28	0.35	5.1	e0.98	0.47	0.71	4.9	6.4	0.54	0.22	0.17	0.12	0.15
29	0.31	7.8	e0.91	0.58	---	3.2	3.5	0.47	0.22	0.15	0.11	0.16
30	0.24	11	e0.83	50	---	2.4	2.5	0.54	0.22	0.15	0.09	0.21
31	0.23	---	e0.76	119	---	2.1	---	0.44	---	0.14	0.08	---
MEAN	3.21	2.37	5.87	6.00	1.89	5.84	4.20	13.5	2.03	0.75	0.32	1.56
MAX	34	37	71	119	15	30	20	104	36	8.1	2.4	38
MIN	0.00	0.10	0.38	0.36	0.60	0.72	0.88	0.44	0.22	0.14	0.08	0.04
IN.	0.80	0.57	1.47	1.50	0.43	1.46	1.02	3.37	0.49	0.19	0.08	0.38

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
MEAN	0.97	1.35	1.74	4.34	5.22	5.07	2.96	5.96	5.63	1.50	0.50	0.53
MAX	3.21	2.74	5.87	11.2	11.2	13.2	4.47	13.5	13.7	3.95	1.07	1.56
(WY)	2002	1999	2002	1999	1999	1998	1998	2002	1998	1998	1998	2002
MIN	0.22	0.13	0.36	0.13	1.89	1.03	0.39	1.29	0.71	0.26	0.14	0.01
(WY)	2000	2000	2001	2000	2002	2000	2000	1999	1999	2001	1999	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1997 - 2002
ANNUAL MEAN	1.93	3.99	2.97
HIGHEST ANNUAL MEAN			4.35
LOWEST ANNUAL MEAN			1.11
HIGHEST DAILY MEAN	71	119	246
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.01	0.06	0.00
MAXIMUM PEAK FLOW	---	1060 <sup>a</sup>	4930 <sup>a</sup>
MAXIMUM PEAK STAGE	---	6.29	9.11
INSTANTANEOUS LOW FLOW	---	0.00	0.00
ANNUAL RUNOFF (INCHES)	5.68	11.76	8.76
10 PERCENT EXCEEDS	3.0	6.4	4.6
50 PERCENT EXCEEDS	0.36	0.64	0.48
90 PERCENT EXCEEDS	0.04	0.14	0.09

e Estimated

<sup>a</sup> From rating extended above 243 ft<sup>3</sup>/s.

## MISSOURI RIVER BASIN

06935770 BONHOMME CREEK NEAR CLARKSON VALLEY, MO

LOCATION.--Lat 38°39'28", long 90°37'10", St. Louis County, Hydrologic Unit 10300200, on right downstream wingwall of Highway CC Bridge, 0.96 mi south of U.S. Highway 40, 3.3 mi west of State Highway 340, 1.48 mi east of County Highway C, and 1.48 mi upstream from Missouri River.

DRAINAGE AREA.--11.3 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1997 to current year. Annual peaks only for 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 449.19 ft above National Geodetic Vertical Datum of 1929. Prior to June 1997, at datum 450.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for estimated daily discharges and those above 1,300 ft<sup>3</sup>/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 11, 1979 reached a stage of 20.10 ft, former datum, discharge 5,620 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.19	0.67	4.3	e1.8	41	3.4	5.9	6.9	4.4	2.2	0.80	0.58
2	0.17	0.95	2.5	e1.6	12	53	5.5	6.1	4.0	2.2	0.70	0.40
3	0.15	0.77	1.9	e1.5	8.9	e17	4.7	5.2	3.6	5.4	0.64	0.43
4	0.14	0.64	1.5	e1.4	6.9	9.3	4.3	4.6	3.5	6.1	0.64	0.75
5	4.2	0.59	1.1	1.5	5.7	9.0	4.0	3.8	15	2.9	0.60	0.71
6	1.2	0.56	1.1	1.7	5.2	8.9	3.9	5.1	5.8	2.1	0.71	0.59
7	0.84	0.48	1.2	e1.6	4.8	7.5	4.0	152	4.1	1.9	0.62	0.39
8	0.82	0.41	0.77	e1.7	4.4	7.0	14	175	3.6	1.8	0.57	0.33
9	1.00	0.39	0.79	e2.3	4.2	22	7.9	189	3.4	1.9	0.47	0.29
10	25	e0.37	0.76	e1.8	4.6	9.6	5.4	29	3.8	9.3	0.44	0.29
11	29	e0.33	0.71	e1.6	4.2	8.4	4.9	18	27	5.6	0.50	0.26
12	13	e0.42	3.5	e1.5	4.2	7.5	4.8	109	319	3.2	0.72	0.24
13	2.7	e0.47	10	e1.5	4.0	6.7	4.8	390	18	2.5	2.0	0.24
14	1.5	e0.44	10	e1.8	3.7	5.9	4.7	38	8.6	1.8	3.0	0.31
15	3.4	e0.60	5.4	e1.6	3.7	12	4.6	26	6.5	1.4	1.5	0.41
16	9.0	0.53	95	e1.5	3.7	12	4.4	26	5.3	1.2	1.1	0.51
17	1.8	0.87	190	e1.3	3.7	7.6	4.3	80	4.5	1.2	1.2	2.4
18	0.92	0.60	15	1.2	3.6	6.6	3.9	35	4.3	1.3	7.2	1.4
19	0.66	0.66	8.3	1.4	6.9	12	12	20	4.0	1.3	2.1	119
20	0.64	0.71	5.6	1.5	7.9	15	46	15	3.6	1.2	1.1	14
21	0.57	0.72	4.5	1.5	4.6	9.0	26	12	3.6	1.2	0.81	3.0
22	0.73	0.86	5.6	1.5	3.9	7.6	13	10	3.4	1.1	0.69	1.6
23	2.7	1.0	4.9	1.8	3.6	7.0	8.5	9.0	3.3	1.7	0.97	1.2
24	31	75	3.7	2.5	3.7	6.8	8.4	9.4	3.0	1.7	0.93	0.81
25	5.5	3.9	3.5	2.1	3.8	65	7.4	8.0	2.9	1.4	0.61	0.65
26	1.5	1.9	3.1	1.7	3.8	21	5.9	6.6	2.9	1.1	0.53	0.67
27	0.84	1.7	2.8	1.7	3.5	14	36	6.0	2.8	1.0	0.49	0.65
28	0.67	8.0	2.8	1.9	3.3	10	19	5.6	2.7	1.0	0.49	0.94
29	0.61	14	2.5	2.5	---	8.9	9.5	5.4	2.5	1.0	0.39	0.71
30	0.57	17	e2.2	108	---	7.5	7.8	5.1	2.2	0.95	0.62	0.63
31	0.57	---	e2.0	414	---	6.6	---	4.7	---	0.94	0.91	---
MEAN	4.57	4.52	12.8	18.4	6.20	13.0	9.85	45.7	16.0	2.24	1.10	5.15
MAX	31	75	190	414	41	65	46	390	319	9.3	7.2	119
MIN	0.14	0.33	0.71	1.2	3.3	3.4	3.9	3.8	2.2	0.94	0.39	0.24
IN.	0.45	0.44	1.27	1.83	0.56	1.30	0.95	4.54	1.54	0.22	0.11	0.50

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

MEAN	2.53	3.58	4.42	10.4	17.6	14.4	8.95	19.6	15.7	4.04	2.17	2.24
MAX	4.57	6.11	12.8	18.8	36.6	40.9	14.5	45.7	28.9	8.51	3.25	5.15
(WY)	2002	1998	2002	1999	1999	1998	1998	2002	2000	1998	2000	2002
MIN	0.79	0.96	0.63	0.96	6.20	3.09	1.72	4.13	3.31	1.08	1.10	0.69
(WY)	2000	2000	2001	2000	2002	2000	2000	2001	1999	1997	2002	1999

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1997 - 2002

ANNUAL MEAN	5.00	11.7	8.77
HIGHEST ANNUAL MEAN			12.3
LOWEST ANNUAL MEAN			3.54
HIGHEST DAILY MEAN	190	Dec 17	932
LOWEST DAILY MEAN	0.14	Oct 4	0.14
ANNUAL SEVEN-DAY MINIMUM	0.23	Sep 28	0.28
MAXIMUM PEAK FLOW	---		1850 <sup>a</sup>
MAXIMUM PEAK STAGE	---		15.94
INSTANTANEOUS LOW FLOW	---		0.14
ANNUAL RUNOFF (INCHES)	5.86		13.71
10 PERCENT EXCEEDS	8.9		16
50 PERCENT EXCEEDS	1.7		3.0
90 PERCENT EXCEEDS	0.53		0.57

e Estimated

<sup>a</sup> From rating extended above 631 ft<sup>3</sup>/s.



06935770 BONHOMME CREEK NEAR CLARKSON VALLEY, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT												
10...	0630	ENVIRONMENTAL	57	8.1	82	7.8	513	14.9	180	53.4	10.7	144
DEC												
10...	1130	ENVIRONMENTAL	.79	11.0	87	7.6	606	4.8	250	76.9	15.1	197
10...	1131	REPLICATE	--	--	--	--	--	--	250	76.8	15.1	--
FEB												
04...	1115	BLANK	--	--	--	--	--	--	1	.37	.03	--
04...	1130	ENVIRONMENTAL	6.7	13.5	101	7.6	462	3.2	170	52.0	9.60	143
MAR												
25...	0542	ENVIRONMENTAL	109	10.8	89	7.7	384	5.7	120	36.0	6.80	98
MAY												
28...	1045	BLANK	--	--	--	--	--	--	--	.17	<.03	--
28...	1100	ENVIRONMENTAL	5.6	7.0	77	7.7	585	18.8	250	78.0	13.0	202
AUG												
05...	1140	ENVIRONMENTAL	.64	6.6	85	7.6	644	27.3	280	83.0	17.0	232

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT													
10...	145	177	0	--	293	E1.6	.06	.370	<.01	.220	.50	4.3	17
DEC													
10...	200	244	0	49.4	E7	<.20	.05	.510	<.01	.030	E.06	10	11
10...	--	--	--	49.4	E5	<.20	.04	.490	<.01	.020	E.05	--	11
FEB													
04...	--	--	--	<.10	1	<.20	<.01	<.020	<.01	<.010	<.02	--	<5
04...	143	174	0	39.0	10	.20	<.01	1.00	<.01	.040	.06	7.1	5
MAR													
25...	97	119	0	--	100	2.6	.28	.390	.03	.190	.49	4.0	16
MAY													
28...	--	--	--	--	<1	<.20	<.01	<.020	<.01	<.010	<.02	--	<5
28...	205	250	0	--	15	.20	.07	.570	.01	.030	.04	7.4	7
AUG													
05...	234	285	0	--	13	.60	.07	.310	.01	.060	.08	12	11

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT													
10...	28000	4000	17000	205	2	<1	1.0	1.0	1.7	241	<1	78	<.1
DEC													
10...	K20	K38	K33	13	<1	1	1.0	1.0	1.0	25	<1	235	<.1
10...	--	--	--	12	<1	1	1.0	1.0	1.0	26	<1	235	<.1
FEB													
04...	--	--	--	<3	<1	<1	<1.0	<1.0	<1.0	<2	<1	<1	<.1
04...	K30	K75	K60	21	<1	<1	<1.0	<1.0	<1.0	22	<1	133	<.1
MAR													
25...	1200	1100	4950	388	1	<1	<1.0	<1.0	2.4	352	<1	106	<.1
MAY													
28...	--	--	--	<3	<1	<1	<1.0	<1.0	<1.0	<2	<1	<1	<.1
28...	100	116	96	11	<1	<1	<1.0	<1.0	<1.0	23	<1	199	<.1
AUG													
05...	K4	K20	108	<3	2	<1	<1.0	<1.0	<1.0	3	<1	254	<.1

## MISSOURI RIVER BASIN

06935770 BONHOMME CREEK NEAR CLARKSON VALLEY, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## MISSOURI RIVER BASIN

06935770 BONHOMME CREEK NEAR CLARKSON VALLEY, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT										
10...	<.02	M	<1	<2	<2	<2	<2	<2	<3	<5
DEC										
10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
FEB										
04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	<.02	M	<1	<2	<2	<2	<2	<2	<1	<5
MAY										
28...	--	--	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--	--	--
AUG										
05...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06935830 CAULKS CREEK AT CHESTERFIELD, MO

LOCATION.--Lat 38°39'16", long 90°35'42", St. Louis County, Hydrologic Unit 10300200, on downstream side of middle pier of Highway CC bridge, 2.0 mi west of State Highway 340, 1.1 mi south of U.S. Route 40, and 1.09 mi upstream of Bonhomme Creek.

DRAINAGE AREA.--17.1 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1996 to current year. Annual peaks only for the 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 453.98 ft above National Geodetic Vertical Datum of 1929. Prior to July 1996, at datum 450.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges and those above 1,300 ft<sup>3</sup>/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 11, 1979 reached a stage of 19.97 ft, former datum, discharge 7,940 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.0	6.1	22	6.5	105	6.5	14	18	9.9	7.3	4.8	5.0
2	4.0	7.4	12	6.3	48	86	13	16	9.7	7.3	4.7	5.0
3	4.1	6.8	9.7	6.0	31	45	11	13	9.5	25	4.6	5.0
4	4.2	5.8	8.4	6.0	21	21	9.8	12	9.3	24	4.6	4.9
5	19	5.5	7.7	6.2	15	16	9.5	11	44	10	4.6	4.8
6	15	5.3	7.3	6.5	13	15	9.3	16	20	8.3	5.5	5.1
7	7.1	5.3	6.8	6.4	11	13	9.7	312	12	7.5	5.1	4.8
8	5.4	5.1	6.4	6.2	10	11	40	250	10	6.9	4.7	4.7
9	5.0	4.7	6.0	6.3	9.2	53	24	327	9.6	6.5	4.5	4.8
10	84	4.8	5.8	6.1	9.0	24	15	68	16	7.0	4.6	4.8
11	104	4.6	5.6	5.7	8.6	16	12	41	122	8.8	4.5	4.7
12	70	4.5	14	5.6	8.3	14	12	185	1030	7.7	4.7	4.5
13	21	4.5	35	5.8	7.7	12	12	541	60	7.2	7.3	4.6
14	15	4.6	41	5.8	7.6	11	11	125	29	6.3	14	4.7
15	15	4.5	19	5.5	7.5	29	10	102	19	6.0	12	4.8
16	53	4.4	190	5.3	7.2	36	9.7	73	15	5.8	9.7	5.1
17	15	4.2	233	5.2	6.9	18	16	152	12	5.9	9.2	9.0
18	10	4.3	60	5.1	6.5	14	11	73	11	5.5	24	13
19	8.4	4.8	35	6.0	13	27	15	41	11	5.3	15	7.5
20	7.5	4.3	23	6.8	18	42	104	29	9.7	5.2	8.1	e150
21	6.8	4.2	15	6.1	9.9	22	75	23	9.3	5.1	6.5	e50
22	6.3	4.3	17	5.8	8.2	16	43	19	9.1	5.1	6.0	e9.0
23	6.9	4.2	14	5.9	7.9	15	24	18	8.9	7.6	6.5	e6.4
24	133	163	10	10	7.6	14	24	18	8.7	6.0	7.4	e7.0
25	34	24	9.2	7.5	7.5	118	26	16	8.6	5.5	6.0	e6.4
26	13	11	8.7	5.9	8.1	54	16	14	8.4	5.2	5.7	e6.3
27	9.2	9.8	8.4	5.6	7.3	42	81	13	8.3	5.1	5.6	e6.2
28	7.8	27	8.1	5.3	6.7	27	64	12	8.0	5.2	5.2	e8.0
29	6.7	49	7.5	5.7	---	21	29	12	7.8	5.1	5.0	e7.5
30	6.8	68	7.1	124	---	17	21	11	7.6	4.9	5.2	e7.0
31	6.1	---	6.8	385	---	15	---	10	---	4.9	5.1	---
MEAN	22.8	15.5	27.7	22.1	15.2	28.1	25.7	82.9	51.8	7.52	7.11	12.4
MAX	133	163	233	385	105	118	104	541	1030	25	24	150
MIN	4.0	4.2	5.6	5.1	6.5	6.5	9.3	10	7.6	4.9	4.5	4.5
IN.	1.54	1.01	1.87	1.49	0.93	1.89	1.68	5.59	3.38	0.51	0.48	0.81

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

MEAN	12.8	20.9	12.5	20.4	41.2	29.7	19.5	37.1	37.3	15.1	12.3	10.4
MAX	22.8	62.0	27.7	34.4	72.6	78.1	29.2	82.9	59.3	35.4	20.2	21.9
(WY)	2002	1997	2002	1999	1999	1998	2002	1998	1998	1998	1996	1996
MIN	8.15	6.33	5.76	5.33	15.2	9.70	6.64	12.5	8.40	7.52	7.11	4.33
(WY)	2000	2000	1999	2000	2002	2000	2000	1999	1999	2002	2002	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL MEAN	16.2	26.7	22.0
HIGHEST ANNUAL MEAN			30.4
LOWEST ANNUAL MEAN			13.2
HIGHEST DAILY MEAN	233	Feb 24	1030
LOWEST DAILY MEAN	1.9	Sep 1	4.0
ANNUAL SEVEN-DAY MINIMUM	3.9	Aug 28	4.3
MAXIMUM PEAK FLOW	---		9690 <sup>a</sup>
MAXIMUM PEAK STAGE	---		14.37
INSTANTANEOUS LOW FLOW	---		4.0
ANNUAL RUNOFF (INCHES)	12.87	21.18	17.50
10 PERCENT EXCEEDS	30	51	34
50 PERCENT EXCEEDS	7.6	8.9	8.8
90 PERCENT EXCEEDS	4.8	4.8	5.1

e Estimated

<sup>a</sup> From rating extended above 544 ft<sup>3</sup>/s.

<sup>b</sup> Occurred during period of construction upstream. Verified by field visit.

06935850 CREVE COEUR CREEK AT CHESTERFIELD, MO

LOCATION.--Lat 38°38'47", long 90°31'35", in SW ¼ NW ¼ NW ¼ sec.13, T.45 N., R.4 E., St. Louis County, Hydrologic Unit 10300200, on left downstream abutment of Highway 40 bridge, 3.71 mi north of State Highway 100 (Manchester Road), 0.75 mi west of State Highway 141, and 10.33 mi upstream of Missouri River.

DRAINAGE AREA.--5.62 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 495.20 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for discharges above 600 ft<sup>3</sup>/s and below 1 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.05	0.50	1.1	0.45	18	1.9	2.5	2.0	1.2	0.56	0.24	0.37
2	0.05	4.5	0.58	0.43	6.5	42	2.9	1.8	1.2	0.52	0.22	0.35
3	0.05	0.56	0.55	0.47	4.2	7.5	2.1	1.4	1.3	0.63	0.25	0.35
4	0.04	0.39	0.49	0.46	2.9	2.9	1.8	1.9	2.1	1.3	0.22	0.33
5	14	0.73	0.53	0.53	2.5	3.5	1.2	1.8	31	0.66	0.24	0.32
6	1.1	1.1	0.90	0.80	2.5	3.1	1.2	10	2.1	0.51	0.74	0.33
7	0.35	1.2	0.70	0.78	2.3	2.4	1.8	136	0.85	0.40	0.31	0.33
8	0.25	1.5	0.48	0.57	2.2	2.6	29	95	0.70	0.37	0.23	0.34
9	0.19	2.2	0.64	0.67	2.8	33	4.7	116	0.72	0.32	0.21	0.35
10	46	1.3	0.54	0.72	3.2	4.4	2.2	6.4	11	0.30	0.21	0.34
11	47	0.64	0.57	0.52	2.2	3.5	1.9	3.5	108	0.40	0.22	0.31
12	14	0.62	23	0.50	2.0	2.9	2.3	106	251	0.39	0.23	0.30
13	5.0	0.69	8.7	0.45	1.8	2.5	2.2	141	5.8	0.36	8.9	0.33
14	1.8	0.52	29	0.54	1.9	2.6	2.1	7.3	2.2	0.32	2.8	0.33
15	21	0.54	4.6	0.47	1.9	27	2.2	3.9	1.5	0.34	0.62	0.37
16	11	0.52	124	0.48	1.6	7.2	2.3	15	1.1	1.9	0.47	0.39
17	0.64	0.49	93	0.42	1.8	3.2	4.1	69	1.1	0.57	0.44	7.2
18	0.97	0.55	8.2	0.42	1.8	3.1	1.4	11	0.96	0.33	18	0.95
19	1.8	2.1	3.7	1.6	13	16	22	3.6	0.91	0.30	0.99	65
20	1.2	0.89	2.5	1.0	4.1	8.1	27	2.1	0.83	0.31	0.61	15
21	1.0	0.54	1.6	0.76	2.1	2.7	24	1.5	0.78	0.29	0.49	1.4
22	1.00	0.45	6.3	0.65	1.7	2.2	4.8	1.4	0.75	0.93	0.44	0.66
23	4.4	1.1	2.3	1.2	1.6	2.2	2.4	1.3	0.72	2.1	1.1	0.52
24	94	131	1.3	4.7	1.6	3.5	8.1	3.1	0.73	0.35	0.62	0.51
25	2.4	0.97	0.95	0.86	2.8	38	2.7	1.7	0.76	0.30	0.48	0.45
26	0.54	2.2	0.93	0.95	3.3	19	1.7	1.1	0.70	0.35	0.42	0.41
27	0.47	0.68	0.60	1.2	2.0	5.7	48	1.2	0.63	0.34	0.37	0.42
28	0.48	19	0.63	0.78	1.9	3.1	13	1.5	0.62	0.32	0.35	0.43
29	0.55	25	0.54	5.5	---	2.7	2.8	1.4	0.62	0.32	0.36	0.42
30	0.52	32	0.50	63	---	2.8	2.1	1.1	0.64	0.29	0.35	0.40
31	0.56	---	0.47	76	---	2.4	---	1.2	---	0.26	0.37	---
MEAN	8.79	7.82	10.3	5.42	3.44	8.51	7.55	24.2	14.4	0.54	1.34	3.31
MAX	94	131	124	76	18	42	48	141	251	2.1	18	65
MIN	0.04	0.39	0.47	0.42	1.6	1.9	1.2	1.1	0.62	0.26	0.21	0.30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	4.42	5.26	3.69	5.72	8.31	7.35	6.08	12.8	12.6	4.61	2.69	1.69
MEAN	4.42	5.26	3.69	5.72	8.31	7.35	6.08	12.8	12.6	4.61	2.69	1.69
MAX	8.79	7.82	10.3	10.3	14.9	15.5	8.84	24.2	20.5	10.5	5.45	3.31
(WY)	2002	2002	2002	1999	1998	1998	1999	2002	2000	1998	1998	2002
MIN	2.14	0.77	0.93	0.85	3.44	3.49	1.62	4.36	3.13	0.54	0.44	0.33
(WY)	1998	2000	2001	2000	2002	2000	2000	1998	1999	2002	2001	1999

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 1997 - 2002

ANNUAL MEAN	5.93		8.01		6.30
HIGHEST ANNUAL MEAN					8.03
LOWEST ANNUAL MEAN					4.54
HIGHEST DAILY MEAN	172	Feb 24	251	Jun 12	480
LOWEST DAILY MEAN	0.04	Sep 5,29,30,Oct 4	0.04	Oct 4	0.02
ANNUAL SEVEN-DAY MINIMUM	0.05	Sep 28	0.25	Jul 30	0.05
MAXIMUM PEAK FLOW	---		1690 <sup>a</sup>	Jun 12	1890 <sup>a</sup>
MAXIMUM PEAK STAGE	---		15.35	Jun 12	15.88
INSTANTANEOUS LOW FLOW	---		0.03	Oct 4,5	0.02
10 PERCENT EXCEEDS	12		17		12
50 PERCENT EXCEEDS	0.68		1.2		1.2
90 PERCENT EXCEEDS	0.15		0.33		0.29

<sup>a</sup> From rating extended above 259 ft<sup>3</sup>/s.

06935890 CREVE COEUR CREEK NEAR CREVE COEUR, MO

LOCATION.--Lat 38°40'55", long 90°29'18", St. Louis County, Hydrologic Unit 10300200, 200 ft downstream of Highway 340 bridge, 2.10 mi west of Interstate 270, 2.95 mi north U.S. Route 40, and 5.80 mi upstream of Missouri River.

DRAINAGE AREA.--22.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1997 to current year. Annual peaks only for 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 449.43 ft above National Geodetic Vertical Datum of 1929. Prior to June 1997, at datum 451.10 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for discharges above 1,200 ft<sup>3</sup>/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood in April 11, 1979 reached a stage of 14.78 ft, former datum, discharge 4,820 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.26	3.7	13	3.6	60	4.7	8.4	9.4	6.4	3.4	1.6	1.7
2	0.37	9.8	7.7	3.6	19	124	9.2	8.9	6.0	3.7	2.1	1.6
3	0.41	6.3	5.9	3.5	14	26	7.8	7.4	5.8	3.4	1.7	2.0
4	0.40	2.5	4.4	3.5	11	13	6.4	6.8	5.4	4.4	1.7	1.5
5	46	1.7	3.6	3.7	8.4	11	6.1	6.4	92	4.6	1.6	1.3
6	8.3	1.7	4.0	4.4	7.8	13	5.9	35	15	6.1	8.6	1.1
7	1.4	2.2	3.1	4.1	7.5	9.0	6.3	628	7.7	3.0	3.0	1.3
8	0.63	2.5	2.5	3.8	6.6	7.8	85	382	6.4	2.5	1.7	1.5
9	0.48	2.5	2.2	4.1	6.4	107	20	602	5.4	3.7	1.4	1.4
10	176	1.7	2.0	4.1	10	16	9.3	30	40	3.8	1.3	1.7
11	148	1.6	2.2	3.9	8.5	12	7.8	17	710	2.7	1.6	1.3
12	68	1.2	58	3.8	5.9	9.8	7.6	357	1520	15	1.6	1.6
13	23	1.1	38	3.7	5.2	8.9	8.1	904	30	4.5	30	2.0
14	13	1.3	98	3.7	5.2	8.1	6.8	35	13	2.5	12	1.1
15	35	1.3	13	3.5	5.1	69	6.3	19	9.3	2.3	4.5	1.1
16	66	1.3	345	3.4	4.7	30	5.9	47	7.9	13	3.2	1.2
17	6.5	1.1	373	3.3	4.3	12	10	294	6.8	7.7	2.6	25
18	3.3	1.4	27	3.1	4.1	9.7	6.2	52	6.2	2.9	57	10
19	2.1	3.1	13	5.4	29	41	58	20	5.6	2.4	10	215
20	2.3	2.8	8.3	5.7	18	34	135	15	5.1	2.2	4.5	51
21	1.7	1.8	6.9	4.4	8.4	14	74	12	5.0	2.3	3.4	9.1
22	2.0	1.6	15	4.0	6.1	9.5	22	10	4.6	10	2.9	4.4
23	3.6	1.7	9.4	4.4	5.3	8.7	11	9.5	4.4	22	3.4	3.4
24	259	526	6.1	16	5.1	9.4	29	13	33	3.6	5.2	2.4
25	20	13	5.3	5.1	5.5	287	17	11	15	2.5	4.0	2.3
26	4.8	8.9	4.9	4.0	8.3	59	8.0	8.7	5.2	2.3	2.7	2.1
27	2.4	10	4.7	3.7	5.0	25	172	7.9	4.9	2.1	2.5	1.9
28	2.2	53	4.6	3.6	4.8	15	57	8.6	5.0	2.0	2.3	2.0
29	2.0	71	4.5	8.6	---	13	15	11	3.8	2.0	1.8	2.0
30	2.1	114	3.9	385	---	11	11	7.7	3.6	2.1	2.0	1.9
31	3.0	---	3.8	721	---	9.1	---	7.0	---	1.7	1.8	---
MEAN	29.2	28.4	35.3	39.9	10.3	33.1	27.7	116	86.3	4.72	5.93	11.9
MAX	259	526	373	721	60	287	172	904	1520	22	57	215
MIN	0.26	1.1	2.0	3.1	4.1	4.7	5.9	6.4	3.6	1.7	1.3	1.1
IN.	1.53	1.44	1.85	2.09	0.49	1.74	1.41	6.05	4.37	0.25	0.31	0.60

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	13.3	16.2	12.7	29.9	48.1	38.7
MAX	29.2	28.4	35.3	75.4	95.9	110
(WY)	2002	2002	2002	1999	1999	1998
MIN	6.51	4.16	5.43	3.40	10.3	9.31
(WY)	1998	2000	1999	2000	2002	2000

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1997 - 2002

ANNUAL MEAN	18.8	35.9	28.6
HIGHEST ANNUAL MEAN			37.0
LOWEST ANNUAL MEAN			13.6
HIGHEST DAILY MEAN	526	Nov 24	2520
LOWEST DAILY MEAN	0.25	Sep 15	0.20
ANNUAL SEVEN-DAY MINIMUM	0.33	Sep 26	1.2
MAXIMUM PEAK FLOW	---		5140 <sup>a</sup>
MAXIMUM PEAK STAGE	---		14.30
INSTANTANEOUS LOW FLOW	---		0.24
ANNUAL RUNOFF (INCHES)	11.56		22.13
10 PERCENT EXCEEDS	36		57
50 PERCENT EXCEEDS	4.4		5.8
90 PERCENT EXCEEDS	0.64		1.7

<sup>a</sup> From rating extended above 588 ft<sup>3</sup>/s.

## MISSOURI RIVER BASIN

06935890 CREVE COEUR CREEK NEAR CREVE COEUR, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 10...	0544	ENVIRONMENTAL	42	7.9	82	7.5	186	16.5	64	19.6	3.65	46
DEC 10...	1315	ENVIRONMENTAL	1.97	9.0	73	7.7	894	5.8	330	92.7	24.0	216
FEB 04...	1330	ENVIRONMENTAL	10	12.2	93	7.8	937	3.9	300	83.0	22.0	204
MAR 20...	1919	ENVIRONMENTAL	56	9.6	84	7.9	1110	9.0	240	68.0	17.0	154
MAY 28...	1300	ENVIRONMENTAL	7.5	7.7	86	7.8	1010	19.5	170	50.0	12.0	251
AUG 05...	1245	ENVIRONMENTAL	1.6	4.9	65	7.6	856	28.6	320	89.0	23.0	221

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 10...	44	54	0	--	338	E1.9	.08	.410	.01	.240	.58	3.0	20
DEC 10...	217	264	0	108	E8	E.50	.06	.460	.01	.090	E.10	9.3	13
FEB 04...	200	244	0	130	15	.50	.03	1.00	<.01	.060	.11	7.0	7
MAR 20...	157	192	0	--	66	.90	.08	.440	.02	.060	.15	3.4	11
MAY 28...	254	310	0	--	39	.80	.12	.790	.05	.090	.17	7.7	25
AUG 05...	225	275	0	--	12	.60	.09	.290	.02	.140	.17	11	15

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STREP, MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 10...	67000	42000	47000	506	2	<1	1.0	1.0	2.0	545	<1	54	.1
DEC 10...	K20	100	K77	17	2	<1	1.0	1.0	1.1	57	<1	192	<.1
FEB 04...	K10	K80	K150	38	1	<1	<1.0	<1.0	1.0	50	<1	242	<.1
MAR 20...	K360	680	860	180	2	<1	<1.0	4.6	2.2	188	<1	232	<.1
MAY 28...	400	480	192	141	2	<1	<1.0	<1.0	2.5	163	<1	192	<.1
AUG 05...	K17	K343	K20	<3	6	<1	<1.0	<1.0	1.3	4	<1	487	<.1





## MISSOURI RIVER BASIN

06935890 CREVE COEUR CREEK NEAR CREVE COEUR, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 10...	E2	M	<.01	<.009	<.01	<2	E1	M	<.006	<.20	<.020	<.01	<.006
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<2	<2	<.01	<.009	<.01	<2	<3	<2	<.006	<.50	<.020	<.02	<.006
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILTR RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILTR RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILTR WATER TOTAL (µg/L) (34694)
OCT 10...	<4	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	<4	<2	<3.0
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34396)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 10...	<.02	E1	<1	<2	<2	<2	<2	<2	<2	<3	M
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<.04	<2	<1	<2	<2	<2	<2	<2	<2	<1	<5
MAY 28...	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06935955 FEE FEE CREEK NEAR BRIDGETON, MO

LOCATION.--Lat 38°43'39", long 90°26'52", St. Louis County, Hydrologic Unit 10300200, on left abutment of old bridge at McKelvey Road, 0.17 mi west of Interstate 270, 0.92 mi north of Dorsett Road, and 0.65 mi upstream of Creve Coeur Creek.

DRAINAGE AREA.--11.7 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year. Annual peaks only for 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 451.99 ft above National Geodetic Vertical Datum of 1929. Prior to 1996 datum of gage 450.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 11, 1979 reached a stage of 21.62 ft, former datum, discharge 3,810 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.38	2.1	4.8	1.9	21	2.4	3.7	4.5	3.4	1.6	0.96	0.87
2	0.53	11	2.8	1.7	8.0	77	4.2	6.4	2.8	1.4	1.0	0.72
3	0.59	1.3	2.5	1.7	5.8	17	3.3	3.5	3.3	5.0	3.4	0.58
4	0.59	0.65	2.1	1.7	4.2	e5.5	2.9	5.1	2.4	2.9	1.2	0.80
5	49	0.67	2.2	1.8	3.8	6.4	2.9	2.8	119	2.1	31	0.85
6	3.5	0.81	4.1	3.4	3.5	5.5	2.8	47	8.0	1.5	153	0.66
7	0.88	0.98	2.1	e2.3	5.2	4.3	5.8	256	4.2	1.6	9.7	0.77
8	0.73	8.1	1.7	e2.0	3.0	3.9	51	131	3.3	1.1	4.9	0.96
9	1.7	0.98	1.5	2.3	2.8	65	9.9	211	4.8	1.7	2.5	0.72
10	124	0.76	1.5	2.6	7.3	6.2	4.1	12	32	1.2	1.5	1.1
11	129	0.74	1.5	2.2	3.2	5.2	3.6	7.7	391	1.9	1.2	1.1
12	25	0.72	61	2.0	2.5	5.3	4.3	332	359	2.2	1.4	0.68
13	20	0.75	13	2.3	2.2	4.1	3.6	242	13	1.7	12	0.56
14	5.2	0.89	65	2.1	2.1	3.7	10	17	7.1	1.1	16	0.71
15	46	1.0	9.1	2.0	2.1	51	3.5	9.6	4.3	1.0	2.4	0.87
16	22	1.6	164	2.0	2.0	9.8	2.5	48	3.7	21	1.2	0.78
17	3.0	1.4	134	2.0	1.9	5.3	4.8	147	3.4	6.7	1.1	26
18	3.2	2.7	12	2.5	1.9	4.4	2.4	21	2.8	10	69	4.0
19	3.2	3.5	6.5	6.9	27	32	320	9.7	2.5	3.6	6.5	171
20	1.7	1.1	4.6	4.0	7.2	15	74	6.9	2.9	2.2	3.0	39
21	1.2	0.98	4.0	3.0	3.2	5.6	70	5.5	2.1	1.6	2.0	5.9
22	1.3	0.97	14	2.5	2.7	4.2	14	5.0	2.0	11	1.7	2.9
23	24	1.3	4.6	7.8	2.3	4.4	9.2	4.5	2.0	30	4.5	1.5
24	143	212	3.4	12	2.2	11	15	9.3	3.9	3.0	2.7	1.3
25	7.1	6.3	3.2	2.6	4.6	106	6.7	5.1	13	1.7	1.4	1.2
26	2.7	11	3.4	2.2	6.6	37	3.7	4.0	3.2	2.2	1.1	1.1
27	1.2	4.0	2.9	2.0	3.5	11	119	3.5	2.2	4.6	1.5	1.4
28	0.98	43	2.8	2.0	2.4	7.3	20	26	1.9	1.3	1.2	1.8
29	1.1	42	2.4	18	---	6.8	6.7	8.5	1.7	1.0	1.2	1.6
30	1.2	48	2.1	177	---	5.1	5.1	5.0	1.5	1.2	1.0	1.6
31	1.5	---	2.0	230	---	4.1	---	4.2	---	1.0	0.87	---
MEAN	20.2	13.7	17.4	16.4	5.15	17.2	26.3	51.6	33.6	4.20	11.0	9.10
MAX	143	212	164	230	27	106	320	332	391	30	153	171
MIN	0.38	0.65	1.5	1.7	1.9	2.4	2.4	2.8	1.5	1.0	0.87	0.56
IN.	1.99	1.31	1.72	1.62	0.46	1.69	2.51	5.09	3.20	0.41	1.09	0.87

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	10.0	16.4	7.30	15.3	22.1	16.7	16.4
MAX	20.2	49.1	17.4	25.7	39.6	34.2	26.6
(WY)	2002	1997	2002	1999	1997	1998	2002
MIN	1.86	1.47	3.09	2.99	5.15	6.58	5.30
(WY)	2000	2000	1999	2000	2002	2000	1999

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1996 - 2002

ANNUAL MEAN	11.0	18.9	14.3
HIGHEST ANNUAL MEAN			18.9
LOWEST ANNUAL MEAN			8.31
HIGHEST DAILY MEAN	298	Feb 24	391
LOWEST DAILY MEAN	0.29	Sep 25	0.38
ANNUAL SEVEN-DAY MINIMUM	0.40	Sep 23	0.75
MAXIMUM PEAK FLOW	---		2640 <sup>a</sup>
MAXIMUM PEAK STAGE	---		14.71
INSTANTANEOUS LOW FLOW	---		0.34
ANNUAL RUNOFF (INCHES)	12.77	21.95	16.57
10 PERCENT EXCEEDS	25	44	29
50 PERCENT EXCEEDS	2.5	3.3	2.6
90 PERCENT EXCEEDS	0.64	1.0	0.86

e Estimated

a From rating extended above 1,130 ft<sup>3</sup>/s.

## MISSOURI RIVER BASIN

06935955 FEE CREEK NEAR BRIDGETON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	
OCT 23...	2100	ENVIRONMENTAL	132	6.4	69	7.4	422	17.5	150	40.5	10.8	83	
DEC 11...	0800	ENVIRONMENTAL	1.5	11.9	91	7.8	1200	3.4	370	97.0	31.4	208	
FEB 04...	1700	ENVIRONMENTAL	4.03	13.4	100	7.9	1450	3.0	360	96.0	29.0	216	
MAR 19...	0441	ENVIRONMENTAL	49	8.3	72	7.9	1060	8.8	260	72.0	20.0	137	
MAY 29...	1045	ENVIRONMENTAL	9.1	6.4	72	7.6	569	20.0	230	64.0	16.0	106	
AUG 05...	1605	ENVIRONMENTAL	.94	6.6	90	7.8	890	29.9	260	69.0	22.0	140	
05...	1606	REPLICATE	--	--	--	--	--	--	260	69.0	22.0	--	
DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 23...	82	100	0	--	1080	E2.1	.24	.390	.01	.140	E.92	6.0	15
DEC 11...	208	254	0	191	E3	E.30	.03	.380	<.01	.110	E.13	5.8	18
FEB 04...	216	264	0	250	4	.40	.05	1.40	.02	.070	.10	5.8	9
MAR 19...	132	161	0	--	48	1.0	.10	.980	.05	.060	.17	3.3	20
MAY 29...	106	129	0	--	5	.70	.12	.940	.05	.160	.19	4.8	22
AUG 05...	143	174	0	--	14	.70	.08	.520	.03	.140	.17	3.9	12
05...	--	--	--	--	12	.70	.08	.530	.03	.140	.18	--	12
DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STREP, MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 23...	K3000	4400	K1800	148	2	<1	1.0	1.0	2.7	326	1	224	.1
DEC 11...	88	K87	116	8	2	<1	1.0	1.0	2.2	74	<1	240	<.1
FEB 04...	K5	K52	K52	<3	1	<1	<1.0	<1.0	1.2	20	<1	460	<.1
MAR 19...	K100	380	1020	60	2	<1	<1.0	4.2	4.6	91	<1	472	<.1
MAY 29...	3100	7000	17800	85	2	<1	<1.0	<1.0	3.7	223	<1	100	<.1
AUG 05...	K30	220	K58	<3	5	<1	<1.0	<1.0	2.1	3	<1	173	<.1
05...	K25	230	K100	<3	5	<1	<1.0	<1.0	2.0	2	<1	172	<.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## MISSOURI RIVER BASIN

06935955 FEE FEE CREEK NEAR BRIDGETON, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible][illegible]

06935955 FEE FEE CREEK NEAR BRIDGETON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 23...	<.02	M	<1	<2	<2	<2	<2	<2	<3	<5
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--
MAR 19...	<.04	<2	<1	<2	<2	<2	<2	<2	<1	<5
MAY 29...	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## MISSOURI RIVER MAIN STEM

06935965 MISSOURI RIVER AT ST. CHARLES, MO

LOCATION.--Lat 38°47'08", long 90°28'19", SE ¼ sec. 29, R.47 N., R.5 E., St. Louis County, Hydrologic Unit 10300200, on right bank approximately ¼ mi downstream from Highway 115 bridge, on the St. Charles Sand Company property.

DRAINAGE AREA.--524,000 mi<sup>2</sup>. The 3,959 mi<sup>2</sup> in Great Divide basin are not included.

PERIOD OF RECORD.--April 1, 2000 to current year. April 15, 1932 to October 1944 recording gage; Feb. 16, 1984 to Sept. 30, 1997 stage only operated by U.S.G.S.; Oct. 1, 1997 to April 1, 2000, stage only operated by U.S. Army Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage 413.472 ft above North American Vertical Datum of 1988. Prior to March 4, 1994 datum of gage was 413.58 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 2-3, 1993 reached a stage of 40.04 ft. by levels of good highwater mark.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59900	51800	55000	36100	118000	46700	52600	127000	118000	61400	42300	50800
2	58100	49000	56000	35300	125000	48100	49600	109000	113000	57400	41800	48100
3	56500	47700	53000	35700	107000	51900	46800	98300	112000	54900	43800	45900
4	55200	48500	49800	35500	95800	50400	47500	94800	110000	51800	43900	44400
5	56000	47300	47900	36300	86300	44100	52000	84100	110000	50200	41400	43500
6	58300	45500	47500	37100	73200	44600	51800	70000	108000	49900	40000	43100
7	59400	44900	46100	38400	64100	49400	50800	70500	108000	51400	37900	42700
8	63200	46200	43000	35000	56000	48100	48800	178000	110000	50400	37000	42700
9	62100	48200	40500	33400	53300	42800	48000	280000	110000	48200	36500	45700
10	57400	47100	38700	35200	51100	40100	50100	307000	110000	47400	36000	46700
11	69700	45700	37100	35600	48500	39500	50800	307000	108000	55000	35900	44500
12	87300	44900	36500	35200	40100	39200	51000	300000	115000	62000	36100	47600
13	78100	44700	38100	31800	37900	40200	55800	321000	145000	59600	36900	49100
14	72100	44400	42900	30000	42900	42100	58500	345000	160000	57900	39400	43800
15	64300	44600	43100	30000	46800	41500	54200	347000	148000	55100	41100	41700
16	55900	45300	43800	30400	47700	40200	51200	339000	132000	51500	42800	40800
17	57600	44800	54900	30500	48000	38200	53000	326000	120000	51100	40800	40900
18	70400	44300	66200	30200	45500	36700	54800	304000	118000	54800	40200	41300
19	75300	43900	63000	30500	39600	36300	52300	267000	113000	51000	44500	42600
20	79000	43500	60500	31300	38500	37900	55300	210000	106000	50900	60600	43800
21	71000	43200	60900	32500	43600	43700	81600	176000	101000	51500	60300	43500
22	60500	42900	61200	34000	46200	50400	99500	160000	98400	50800	57600	44000
23	53800	42900	53400	33700	50200	56800	92300	141000	96400	46900	52300	43800
24	51600	46000	45000	34600	57400	61100	105000	124000	94700	45200	52400	42800
25	50300	51500	40500	34600	55100	54000	101000	126000	e92200	49500	53500	41700
26	51000	50300	38400	34100	46300	47700	81500	133000	87900	48000	53700	41000
27	51300	47400	38000	35700	42100	50400	72300	147000	84900	43200	51500	41200
28	50600	47100	37900	35500	43300	58700	82400	163000	85200	41000	50400	41300
29	50400	48300	38000	34100	---	60500	116000	153000	82700	43700	58600	40300
30	49400	50900	38400	33500	---	57200	130000	142000	71300	46300	61600	39200
31	49400	---	37600	47300	---	55100	---	128000	---	46200	54800	---
MEAN	60810	46430	46870	34290	58910	46890	66550	196100	109000	51100	45990	43620
MAX	87300	51800	66200	47300	125000	61100	130000	347000	160000	62000	61600	50800
MIN	49400	42900	36500	30000	37900	36300	46800	70000	71300	41000	35900	39200

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	54460	48330	39230	33150	71860	87940	80520	125500	129300	76870	56680	50460
MAX	60810	50230	46870	34290	84820	129000	121100	196100	202100	104600	65550	62060
(WY)	2002	2001	2002	2002	2001	2001	2001	2002	2001	2001	2001	2001
MIN	48120	46430	31590	32000	58910	46890	53880	59440	76770	51100	45990	43620
(WY)	2001	2002	2001	2001	2002	2002	2000	2000	2000	2002	2002	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 2000 - 2002	
ANNUAL MEAN	89530		67280		77370	
HIGHEST ANNUAL MEAN					87470	
LOWEST ANNUAL MEAN					67280	
HIGHEST DAILY MEAN	303000		Jun 9		347000	
LOWEST DAILY MEAN	25100		Jan 1		24700	
ANNUAL SEVEN-DAY MINIMUM	26100		Jan 1		25600	
MAXIMUM PEAK FLOW	---				350000	
MAXIMUM PEAK STAGE	---		31.69		May 15	
INSTANTANEOUS LOW FLOW	---				24600	
10 PERCENT EXCEEDS	155000				143000	
50 PERCENT EXCEEDS	73500				53000	
90 PERCENT EXCEEDS	38100				35500	

e Estimated



06935980 COWMIRE CREEK AT BRIDGETON, MO

LOCATION.--Lat 38°45'50", long 90°25'59", St. Louis County, Hydrologic Unit 10300200, on left bank of bridge at Kirchner Brick Co., 1.11 mi west of Interstate 70 and 270 interchange, 1.7 mi south of State Highway 370, 0.16 mi north of County Highway A (St Charles Rock Road), and 6.29 mi upstream of the Missouri River.

DRAINAGE AREA.--3.74 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year. Annual peaks only for 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 464.46 ft above National Geodetic Vertical Datum of 1929. Prior to May 1997, at datum 464.55 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for discharges below 0.5 ft<sup>3</sup>/s and above 300 ft<sup>3</sup>/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 11, 1979 reached a stage of 13.86 ft, former datum, discharge, 2,500 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.18	0.34	1.2	0.61	3.8	0.65	1.3	1.4	1.0	0.70	0.20	0.35
2	0.20	2.2	0.76	0.54	2.0	26	1.2	1.8	0.98	0.66	0.20	0.35
3	0.13	0.30	0.70	0.51	1.5	4.1	1.0	1.4	0.93	0.66	0.19	0.40
4	0.13	0.24	0.61	0.48	1.3	2.2	1.0	1.2	0.93	0.63	0.17	0.29
5	17	1.4	0.57	0.59	1.2	1.8	1.0	1.1	24	0.66	5.6	0.64
6	0.51	0.24	0.95	1.2	1.2	1.3	0.96	13	1.5	0.83	173	0.22
7	0.24	0.15	0.51	0.93	1.1	1.2	1.9	67	1.2	0.64	1.4	0.25
8	0.18	0.23	0.42	0.77	1.0	1.1	14	30	0.95	0.61	0.51	0.21
9	0.20	0.17	0.36	0.80	1.00	16	1.9	49	1.4	0.62	0.48	0.34
10	44	0.19	0.35	0.83	2.5	1.4	1.2	2.5	8.2	0.74	0.47	0.29
11	50	0.19	0.35	0.65	0.98	1.2	1.1	1.9	122	0.63	0.44	0.15
12	3.8	0.18	17	0.62	0.93	1.3	1.3	98	137	0.75	1.3	0.19
13	4.4	0.15	2.3	0.68	1.1	1.3	0.97	53	2.8	0.51	2.0	0.23
14	0.66	0.15	21	0.71	0.90	1.1	0.98	3.7	1.7	0.37	3.6	0.23
15	17	0.15	4.0	0.70	0.93	9.2	0.87	2.4	1.3	0.36	0.45	0.56
16	3.3	0.15	49	0.69	0.93	1.7	0.78	13	1.2	1.8	0.34	0.19
17	0.44	0.15	31	0.65	0.80	1.1	1.2	37	1.0	0.77	0.37	6.7
18	0.28	1.1	2.2	1.0	0.63	1.0	0.79	4.0	0.93	1.6	23	0.50
19	0.25	1.5	1.4	2.3	7.4	7.7	135	2.3	0.93	0.51	1.3	121
20	0.19	0.58	1.1	1.0	1.8	3.1	14	2.0	0.90	0.43	1.1	11
21	0.19	0.42	0.94	0.98	0.84	1.4	16	1.6	0.88	0.31	0.91	1.1
22	0.19	0.41	3.4	0.79	0.70	1.2	2.2	1.5	0.85	0.71	0.61	0.62
23	12	0.47	1.1	2.9	0.62	1.2	1.9	1.5	0.81	3.0	3.0	0.48
24	19	70	0.94	1.8	0.62	3.8	2.3	4.2	25	0.37	0.64	0.35
25	1.0	1.4	0.84	0.88	1.9	24	1.4	1.5	2.5	0.33	0.48	0.37
26	0.60	2.5	0.73	0.82	1.3	10	1.3	1.3	1.3	2.1	0.41	0.40
27	0.44	0.71	0.69	0.71	0.98	2.5	34	1.3	0.96	0.36	0.38	0.39
28	0.33	14	0.69	0.74	0.85	1.8	2.8	6.6	0.93	0.22	0.35	0.37
29	0.30	12	0.67	4.1	---	2.2	1.6	1.5	0.91	0.21	0.38	0.29
30	0.38	16	0.69	44	---	1.8	1.4	1.3	0.80	0.20	0.45	0.37
31	0.31	---	0.69	57	---	1.4	---	1.2	---	0.21	0.35	---
MEAN	5.74	4.26	4.75	4.22	1.46	4.38	8.24	13.2	11.5	0.73	7.23	4.96
MAX	50	70	49	57	7.4	26	135	98	137	3.0	173	121
MIN	0.13	0.15	0.35	0.48	0.62	0.65	0.78	1.1	0.80	0.20	0.17	0.15
IN.	1.79	1.28	1.48	1.32	0.41	1.36	2.49	4.11	3.48	0.23	2.25	1.50

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

MEAN	2.69	2.57	2.04	4.01	5.69	4.26	6.30	6.89	7.98	4.22	3.01	2.23
MAX	5.74	4.26	4.75	8.86	11.3	9.35	12.9	13.2	11.8	10.4	7.23	4.96
(WY)	2002	2002	2002	1999	1999	1998	1998	2002	2000	1998	2000	2002
MIN	1.44	0.84	0.75	0.84	1.46	1.57	1.66	2.45	3.48	0.73	1.14	0.57
(WY)	1998	2000	1999	2000	2002	2001	2000	2001	1997	2002	1999	1999

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL MEAN	3.43	5.92	4.43
HIGHEST ANNUAL MEAN			5.91
LOWEST ANNUAL MEAN			2.63
HIGHEST DAILY MEAN	120	Jun 27	240
LOWEST DAILY MEAN	0.05	Aug 19-21, Sep 3,7	0.05
ANNUAL SEVEN-DAY MINIMUM	0.09	Sep 11	0.07
MAXIMUM PEAK FLOW	---	2990 <sup>a</sup>	2990 <sup>a</sup>
MAXIMUM PEAK STAGE	---	15.05	15.05
INSTANTANEOUS LOW FLOW	---	0.10	0.04
ANNUAL RUNOFF (INCHES)	12.59	21.70	16.28
10 PERCENT EXCEEDS	8.9	13	7.6
50 PERCENT EXCEEDS	0.49	0.96	0.69
90 PERCENT EXCEEDS	0.11	0.24	0.15

<sup>a</sup> From rating extended above 100 ft<sup>3</sup>/s.

## MISSOURI RIVER BASIN

06935980 COWMIRE CREEK AT BRIDGETON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT												
05...	0555	ENVIRONMENTAL	27	8.3	84	7.6	186	14.7	200	47.4	18.8	101
05...	0556	REPLICATE	--	--	--	--	--	--	200	49.4	19.0	--
DEC												
11...	1040	ENVIRONMENTAL	.35	10.2	97	7.9	1350	12.7	510	119	52.3	282
FEB												
05...	1030	ENVIRONMENTAL	1.2	11.8	85	7.8	1210	1.7	510	121	50.0	313
MAR												
25...	0038	ENVIRONMENTAL	40	11.5	91	7.9	313	4.3	200	51.0	18.0	128
MAY												
29...	1600	ENVIRONMENTAL	1.3	7.7	88	7.9	890	20.7	340	85.0	31.0	182
AUG												
08...	1240	ENVIRONMENTAL	.41	5.9	68	7.3	479	21.9	180	48.0	15.0	110

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT													
05...	101	123	0	--	170	E2.5	.20	.950	.05	.170	.55	4.8	39
05...	--	--	--	--	186	E2.9	.21	.950	.06	.180	.55	--	39
DEC													
11...	284	347	0	225	E2	E.20	.02	.090	.02	.060	E.10	7.0	20
FEB													
05...	319	389	0	270	12	.30	<.01	.850	<.01	.040	.07	8.7	11
MAR													
25...	129	157	0	--	74	1.4	.27	1.20	.05	.050	.18	3.3	22
MAY													
29...	183	224	0	--	8	.60	.09	1.10	.06	.070	.09	4.2	18
AUG													
08...	112	137	0	--	60	.90	.10	.890	.08	.210	.29	11	15

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STREP, MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT													
05...	37000	32000	5600	48	2	<1	1.0	1.1	3.7	116	<1	127	<.1
05...	--	--	--	55	2	<1	1.0	1.0	3.3	115	<1	116	<.1
DEC													
11...	48	K174	310	<3	<1	1	1.0	1.0	1.1	56	<1	243	<.1
FEB													
05...	150	54	K243	<3	<1	<1	<1.0	<1.0	<1.0	26	<1	601	<.1
MAR													
25...	2900	3200	K23400	71	2	<1	<1.0	2.4	4.0	87	<1	316	<.1
MAY													
29...	190	K1440	580	16	2	<1	<1.0	<1.0	2.0	36	<1	131	<.1
AUG													
08...	K180	2500	700	6	3	<1	<1.0	<1.0	2.1	4	<1	112	<.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

06935980 COWMIRE CREEK AT BRIDGETON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT										
05...	<.06	E1	<1	<2	M	<2	<2	<2	<3	M
05...	<.06	E1	<1	<2	M	<2	<2	<2	<3	M
DEC										
11...	--	--	--	--	--	--	--	--	--	--
FEB										
05...	--	--	--	--	--	--	--	--	--	--
MAR										
25...	<.02	E1	<1	<2	M	<2	<2	<2	<1	<5
MAY										
29...	--	--	--	--	--	--	--	--	--	--
AUG										
08...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06935997 MILL CREEK NEAR FLORISSANT, MO

LOCATION.--Lat 38°50'54", long 90°17'10", St. Louis County, Hydrologic Unit 10300200, on right downstream wingwall of Old Jamestown Road bridge, 2.50 mi west of U.S. 367 and 67 (Lewis and Clark Blvd.), 2.08 mi north of U.S. Route 67 (Lindbergh Blvd.), and 1.70 mi upstream of the Missouri River.

DRAINAGE AREA.--2.12 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 432.34 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair except for estimated daily discharges and those below 1 ft<sup>3</sup>/s and above 1,000 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.20	e1.0	0.36	3.1	1.1	0.68	0.50	0.82	0.46	0.21	0.17
2	0.06	0.53	e0.74	0.36	1.4	7.5	0.65	0.47	0.78	0.47	0.22	0.15
3	0.06	0.30	e0.56	0.38	1.1	1.8	0.60	0.39	0.70	0.48	0.23	0.13
4	0.05	0.24	e0.47	0.38	0.87	1.1	0.57	0.37	0.65	0.47	0.20	0.13
5	2.8	0.24	e0.37	0.45	0.81	1.5	0.57	0.33	4.7	0.50	0.19	0.13
6	0.24	e0.22	e0.60	0.58	0.77	0.96	0.57	5.8	0.88	0.50	3.4	0.13
7	0.10	e0.21	e0.53	0.47	0.71	0.83	0.70	39	0.67	0.51	0.19	0.13
8	0.06	e0.21	e0.47	0.46	0.63	1.0	3.8	10	0.62	0.52	0.16	0.14
9	0.08	e0.22	e0.43	0.43	0.64	4.7	1.2	18	0.60	0.57	0.16	0.13
10	8.9	e0.25	e0.39	0.43	1.5	0.96	0.66	2.6	2.0	0.61	0.16	0.10
11	17	e0.28	0.37	0.37	0.95	0.81	0.72	2.2	37	0.63	7.2	0.12
12	4.8	e0.27	6.2	0.44	0.85	0.79	0.70	176	31	1.0	0.51	0.13
13	2.4	e0.26	1.4	0.45	0.75	0.66	0.66	42	2.1	0.64	0.25	0.14
14	0.67	e0.27	7.3	0.50	0.77	0.69	0.65	3.4	1.4	0.56	0.67	0.14
15	3.3	e0.26	1.1	0.44	0.81	1.4	0.61	2.4	0.95	0.50	0.27	0.23
16	2.8	e0.26	13	0.41	0.74	0.85	0.60	11	0.84	0.52	0.62	0.14
17	0.39	e0.25	12	0.39	0.71	0.66	0.72	16	0.78	0.57	0.24	0.49
18	0.24	e0.26	1.7	0.38	0.74	0.56	0.58	3.5	0.69	0.55	2.5	0.19
19	0.21	e0.42	0.96	0.88	2.4	1.8	9.2	2.0	0.63	0.46	0.79	27
20	0.16	e0.30	0.79	0.56	1.6	1.0	4.6	1.6	1.0	0.43	0.26	2.1
21	0.16	e0.35	0.67	0.52	1.1	0.64	5.8	1.4	0.59	0.41	0.23	0.23
22	0.16	e0.28	1.1	0.52	0.63	0.55	0.96	1.3	0.57	0.38	0.20	0.11
23	1.2	e0.21	0.71	0.98	0.57	0.61	0.68	1.3	0.55	0.50	0.79	0.10
24	6.0	e45	0.58	1.1	0.57	0.73	0.63	1.5	0.53	0.33	0.35	0.12
25	0.81	e0.55	0.50	0.48	2.0	4.8	0.48	1.3	1.5	0.28	0.27	0.10
26	0.36	e1.0	0.49	0.43	1.3	4.9	0.44	1.3	0.50	0.39	0.25	0.10
27	0.24	e0.55	0.53	0.43	1.2	2.6	5.7	1.2	0.52	0.27	0.25	0.10
28	0.15	e7.8	0.56	0.43	1.2	1.4	0.94	1.2	0.44	0.26	0.23	0.10
29	0.14	e3.1	0.46	0.86	---	1.3	0.56	1.1	0.48	0.25	0.24	0.11
30	0.13	e6.0	0.39	11	---	0.91	0.48	0.96	0.45	0.25	0.22	0.10
31	0.17	---	0.36	22	---	0.79	---	0.87	---	0.21	0.20	---
MEAN	1.74	2.34	1.83	1.54	1.09	1.61	1.52	11.3	3.16	0.47	0.70	1.11
MAX	17	45	13	22	3.1	7.5	9.2	176	37	1.0	7.2	27
MIN	0.05	0.20	0.36	0.36	0.57	0.55	0.44	0.33	0.44	0.21	0.16	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	1.20	1.01	0.75	1.60	2.54	1.83
MAX	3.05	2.34	1.83	3.70	6.73	4.56
(WY)	2001	2002	2002	1999	1999	1998
MIN	0.24	0.32	0.42	0.30	1.09	0.57
(WY)	1998	2000	2001	2000	2002	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

	2001	2002	1997-2002
ANNUAL MEAN	1.31	2.38	1.89
HIGHEST ANNUAL MEAN			2.65
LOWEST ANNUAL MEAN			1.18
HIGHEST DAILY MEAN	55	Apr 10	215
LOWEST DAILY MEAN	0.03	Aug 1,6-8	0.03
ANNUAL SEVEN-DAY MINIMUM	0.05	Jul 26	0.05
MAXIMUM PEAK FLOW	---	2020 <sup>a</sup>	2780 <sup>a</sup>
MAXIMUM PEAK STAGE	---	9.13	10.53
INSTANTANEOUS LOW FLOW	---	0.04	0.02
10 PERCENT EXCEEDS	2.3	3.4	2.5
50 PERCENT EXCEEDS	0.39	0.57	0.44
90 PERCENT EXCEEDS	0.06	0.16	0.15

e Estimated

<sup>a</sup> From rating extended above 870 ft<sup>3</sup>/s.

06936475 COLDWATER CREEK NEAR BLACK JACK, MO

LOCATION.--Lat 38°49'04", long 90°15'04", in NE ¼ SE ¼ NW ¼ sec.17, T.47 N., R.7 E., St. Louis County, Hydrologic Unit 10300200, on right downstream abutment of Old Jamestown Road bridge, 0.36 mi south of U.S. Route 67 (Lindbergh Blvd.), 1.1 mi west of Highway 367 (Lewis and Clark Blvd.), and 3.8 mi upstream of the Missouri River.

DRAINAGE AREA.--40.4 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Water-discharge records fair except for estimated daily discharges and those below 5 ft<sup>3</sup>/s and above 2,500 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	2.1	3.5	20	3.8	84	9.5	15	e18	9.7	4.2	4.3	2.2
2	2.1	30	13	3.8	31	233	14	e42	8.9	5.1	3.2	2.0
3	2.1	8.3	10	4.3	24	41	12	e17	8.4	39	3.6	1.8
4	2.1	3.3	8.3	5.0	18	22	10	e22	8.6	16	3.0	1.7
5	143	3.3	7.3	5.6	15	21	10	e14	271	4.9	4.1	1.7
6	15	3.5	13	9.5	14	20	11	e136	21	3.4	833	1.9
7	3.6	2.9	8.0	8.8	13	15	12	e961	10	2.9	10	1.9
8	2.1	2.9	6.4	6.2	11	14	154	e583	7.9	2.6	5.4	2.0
9	2.0	2.9	5.3	6.6	10	208	52	497	12	4.9	3.8	1.7
10	399	3.0	4.9	7.1	23	23	e17	41	106	6.6	3.0	1.7
11	396	3.0	5.4	6.6	14	18	e12	27	989	4.5	47	1.9
12	183	2.5	146	5.4	9.7	17	e21	1350	1470	8.1	11	2.5
13	42	2.6	72	5.0	9.1	14	e15	1030	54	7.1	6.3	2.2
14	20	2.8	243	5.3	8.6	13	e13	63	21	3.5	35	2.1
15	80	3.3	25	5.4	9.0	119	e8.7	34	14	3.0	7.2	2.7
16	129	3.3	476	4.3	9.2	42	e9.2	164	11	3.1	4.5	3.0
17	12	3.1	498	4.2	8.9	17	e11	375	10	41	3.7	34
18	6.9	2.8	48	3.6	8.9	14	e7.7	74	9.9	61	164	19
19	5.7	17	28	17	75	71	e602	32	8.3	14	40	496
20	5.8	7.0	19	11	29	48	e219	24	7.8	4.5	9.4	107
21	5.6	4.8	15	5.8	12	19	e195	20	7.6	3.4	5.5	9.9
22	5.6	4.5	39	5.5	8.9	15	e48	18	7.4	3.1	4.5	3.1
23	35	4.2	18	6.6	8.2	14	e25	15	7.1	33	26	2.2
24	321	693	11	48	7.7	16	e30	29	26	6.4	12	2.0
25	26	15	8.6	6.8	13	272	e20	19	49	3.7	4.1	1.6
26	9.0	21	7.7	5.3	26	117	e15	13	9.4	15	3.4	1.4
27	6.0	17	7.7	4.8	10	44	e357	11	5.9	8.1	3.3	2.0
28	4.5	137	7.3	4.7	10	28	e105	40	5.5	3.3	3.2	1.9
29	4.6	99	6.5	31	---	27	e31	34	4.9	3.0	2.9	2.2
30	4.3	226	4.6	427	---	22	e22	13	5.0	3.7	4.8	1.8
31	4.2	---	4.0	723	---	17	---	13	---	6.0	2.8	---
MEAN	60.6	44.4	57.6	45.1	18.6	50.7	69.1	185	106	10.6	41.1	23.9
MAX	399	693	498	723	84	272	602	1350	1470	61	833	496
MIN	2.0	2.5	4.0	3.6	7.7	9.5	7.7	11	4.9	2.6	2.8	1.4
IN.	1.73	1.23	1.64	1.29	0.48	1.45	1.91	5.28	2.93	0.30	1.17	0.66

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	31.0	37.9	21.2	39.5	72.7	47.8	52.2
MAX	60.6	95.6	57.6	79.3	173	118	82.3
(WY)	2002	1997	2002	1999	1999	1998	2002
MIN	14.8	7.37	8.59	8.25	18.6	14.9	17.3
(WY)	2000	2000	1999	2000	2002	2000	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL MEAN	37.0	59.7	46.0
HIGHEST ANNUAL MEAN			59.7
LOWEST ANNUAL MEAN			30.3
HIGHEST DAILY MEAN	871	Apr 11	4030
LOWEST DAILY MEAN	2.0	Oct 9	1.4
ANNUAL SEVEN-DAY MINIMUM	2.1	Sep 28	1.8
MAXIMUM PEAK FLOW	---		6740 <sup>a</sup>
MAXIMUM PEAK STAGE	---		9.02
INSTANTANEOUS LOW FLOW	---		1.3
ANNUAL RUNOFF (INCHES)	12.45	20.07	15.46
10 PERCENT EXCEEDS	95	132	86
50 PERCENT EXCEEDS	7.5	10	8.3
90 PERCENT EXCEEDS	2.7	2.9	3.1

e Estimated

<sup>a</sup> From rating extended above 1,250 ft<sup>3</sup>/s.

## MISSOURI RIVER BASIN

06936475 COLDWATER CREEK NEAR BLACK JACK, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 10...	0924	ENVIRONMENTAL	1640	7.1	75	7.8	129	17.1	45	13.2	3.01	38
DEC 10...	1445	ENVIRONMENTAL	4.8	9.2	76	8.0	1130	6.4	370	89.5	36.7	245
FEB 04...	1515	ENVIRONMENTAL	17	8.4	64	6.9	1170	3.8	390	93.0	38.0	193
MAR 09...	0442	ENVIRONMENTAL	189	1.1	11	7.4	3	11.8	370	87.0	36.0	302
MAY 28...	1545	ENVIRONMENTAL	11	6.3	73	7.7	900	21.4	380	109	25.0	206
AUG 05...	1415	ENVIRONMENTAL	3.2	7.6	104	7.8	641	31.0	220	55.0	19.0	145

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 10...	38	46	0	--	861	E2.4	.05	.440	<.01	.200	1.00	1.3	17
DEC 10...	245	299	0	157	E3	E.40	.07	.800	.02	.090	E.12	5.2	20
FEB 04...	196	239	0	200	2	.50	.02	1.60	.03	.040	.08	47	11
MAR 09...	301	368	0	--	134	3.1	.25	<.020	<.01	<.010	.20	21	90
MAY 28...	209	255	0	--	17	.60	.08	1.00	.06	.060	<.02	7.9	13
AUG 05...	147	179	0	--	10	.80	.14	.230	.03	.140	.18	4.4	20

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 10...	11000	21500	20000	452	2	<1	1.0	1.1	6.5	612	2	67	.1
DEC 10...	K20	54	K18	19	2	<1	1.0	1.0	1.7	65	<1	158	<.1
FEB 04...	K27	100	40	9	1	<1	<1.0	<1.0	1.3	19	<1	218	<.1
MAR 09...	<200	K500	K667	15	4	<1	<1.0	6.4	1.5	42	<1	1100	<.1
MAY 28...	200	K320	190	29	2	<1	<1.0	<1.0	<1.0	58	<1	271	<.1
AUG 05...	K10	48	76	<3	5	<1	<1.0	<1.0	1.6	4	<1	154	<.1



## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## MISSOURI RIVER BASIN

06936475 COLDWATER CREEK NEAR BLACK JACK, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 10...	E2	M	<.01	<.009	<.01	<2	E2	M	<.006	<.20	<.020	<.01	<.006
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	M	M	<.01	<.009	<.01	<2	M	<2	<.006	<.10	<.015	<.02	<.006
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILTR RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILTR RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILTR WATER TOTAL (µg/L) (34694)
OCT 10...	M	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (39702)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (34696)	NAPHTH- ALENE TOTAL (µg/L)
OCT 10...	<.02	E2	<1	<2	<2	<2	<2	<2	<3	M	
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	M	<1	<2	<2	<2	<2	<2	<1	<5	
MAY 28...	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

06936530 SPANISH LAKE TRIBUTARY NEAR BLACK JACK, MO

LOCATION.--Lat 38°48'04", long 90°12'59", in SE ¼ SE ¼ NW ¼ sec.22, T.47 N., R.7 E., St. Louis County, Hydrologic Unit 10300200, on left downstream wingwall of Bellefontaine Ave. bridge, 2.14 mi north of Interstate 270, 0.65 mi east of Highway 367 (Lewis and Clark Blvd.), and 1.9 mi upstream of the Missouri River.

DRAINAGE AREA.--0.25 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 502.33 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.01	0.13	e0.06	0.76	0.09	0.17	0.17	0.20	0.00	0.00	0.00
2	0.00	0.17	0.08	e0.05	0.35	1.7	0.15	0.33	0.14	0.00	0.00	0.00
3	0.00	0.04	0.06	e0.04	0.27	0.61	0.12	0.15	0.11	0.00	0.00	0.00
4	0.00	0.04	0.05	e0.03	0.18	0.40	0.09	0.10	0.07	0.00	0.00	0.00
5	0.58	0.04	0.04	0.08	0.14	0.30	0.11	0.08	1.0	0.00	0.00	0.00
6	0.04	0.04	0.06	0.18	0.13	0.24	0.11	1.4	0.25	0.00	0.64	0.00
7	0.00	0.03	0.04	0.09	0.13	0.18	0.16	10	0.11	0.00	0.00	0.00
8	0.00	0.02	0.04	0.18	0.12	0.15	1.7	2.9	0.08	0.00	0.00	0.00
9	0.00	0.01	0.03	0.12	0.11	2.2	0.45	2.9	0.07	0.00	0.00	0.00
10	2.8	0.01	0.02	0.13	0.19	0.44	0.21	0.60	0.14	0.00	0.21	0.00
11	2.0	0.01	0.02	0.04	0.11	0.31	0.15	0.42	3.0	0.00	2.3	0.00
12	0.92	0.01	0.98	0.04	0.10	0.24	0.16	15	4.2	0.00	0.70	0.00
13	0.39	0.01	0.38	0.04	0.09	0.19	0.15	8.1	0.66	0.00	0.06	0.00
14	0.16	0.02	2.4	0.04	0.07	0.15	0.18	1.5	0.39	0.00	0.12	0.00
15	0.68	0.02	0.70	0.03	0.07	1.9	0.13	1.2	0.32	0.00	0.02	0.00
16	0.70	0.02	7.0	0.04	0.07	0.60	0.11	2.1	0.18	0.00	0.32	0.00
17	0.11	0.02	6.3	0.03	0.06	0.34	0.10	4.3	0.13	0.00	0.06	0.06
18	0.05	0.03	1.2	0.03	0.06	0.26	0.09	1.7	0.10	0.00	1.2	0.04
19	0.02	0.05	0.58	0.20	0.55	0.95	1.2	1.1	0.07	0.00	0.75	0.76
20	0.00	0.04	0.30	0.10	0.27	0.60	2.0	0.98	0.05	0.00	0.26	1.0
21	0.00	0.03	0.18	0.09	0.13	0.33	1.5	0.90	0.04	0.00	0.08	0.12
22	0.00	0.02	0.34	0.10	0.10	0.23	0.48	0.77	0.03	0.00	0.00	0.00
23	0.09	0.02	0.15	0.18	0.09	0.20	0.30	0.66	0.01	0.00	0.08	0.00
24	1.1	4.4	0.11	0.26	0.09	0.43	0.16	0.72	0.00	0.00	0.06	0.00
25	0.19	0.20	0.10	0.09	0.18	2.4	0.11	0.65	0.24	0.00	0.00	0.00
26	0.06	0.32	0.09	0.05	0.19	1.1	0.10	0.48	0.09	0.01	0.00	0.00
27	0.04	0.10	0.09	0.04	0.20	0.57	2.5	0.84	0.03	0.00	0.00	0.00
28	0.01	1.2	0.09	0.04	0.15	0.46	0.84	0.84	0.02	0.00	0.00	0.00
29	0.01	0.79	0.07	0.40	---	0.35	0.36	0.71	0.00	0.00	0.00	0.00
30	0.01	0.86	0.07	3.1	---	0.25	0.23	0.50	0.00	0.00	0.00	0.00
31	0.01	---	e0.06	5.0	---	0.20	---	0.31	---	0.00	0.00	---
MEAN	0.32	0.29	0.70	0.35	0.18	0.59	0.47	2.01	0.39	0.00	0.22	0.07
MAX	2.8	4.4	7.0	5.0	0.76	2.4	2.5	15	4.2	0.01	2.3	1.0
MIN	0.00	0.01	0.02	0.03	0.06	0.09	0.09	0.08	0.00	0.00	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	0.22	0.26	0.28	0.44	0.62	0.59	0.48	0.77	0.51	0.59	0.18	0.09
MAX	0.45	0.43	0.70	0.80	1.81	1.28	0.74	2.01	1.11	1.25	0.26	0.16	
(WY)	2001	1999	2002	1999	1999	1998	1998	2002	1998	1998	1998	2001	
MIN	0.06	0.02	0.13	0.26	0.18	0.23	0.12	0.14	0.18	0.00	0.07	0.00	
(WY)	2000	2000	1999	2000	2002	2001	2000	2001	2001	2002	1999	1999	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1997 - 2002

ANNUAL MEAN	0.30	0.47	0.42	
HIGHEST ANNUAL MEAN			0.54	1998
LOWEST ANNUAL MEAN			0.28	2001
HIGHEST DAILY MEAN	7.0	Dec 16	31	Jul 30 1998
LOWEST DAILY MEAN	0.00	Many Days	0.00	Each Year
ANNUAL SEVEN-DAY MINIMUM	0.00	At Times	0.00	At Times
MAXIMUM PEAK FLOW	---		154 <sup>a</sup>	Jul 30 1998
MAXIMUM PEAK STAGE	---		3.55	May 12
INSTANTANEOUS LOW FLOW	---		0.00	Many Days
10 PERCENT EXCEEDS	0.74		1.1	
50 PERCENT EXCEEDS	0.07		0.09	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated

<sup>a</sup> From rating extended above 110 ft<sup>3</sup>/s.

## LOWER MISSISSIPPI RIVER BASIN

07001985 WATKINS CREEK AT BELLEFONTAINE NEIGHBORS, MO

LOCATION.--Lat 38°45'44", long 90°11'48", St. Louis County, Hydrologic Unit 07140101, on left downstream wingwall of Fry Lane bridge, 0.34 mi south of Interstate 270, 2.34 mi east of Highway 367 (Lewis and Clark Blvd.), and 1.76 mi upstream of Mississippi River.

DRAINAGE AREA.--5.19 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 431.94 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for estimated daily discharges and those below 1 ft<sup>3</sup>/s and above 1,000 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.31	1.1	0.93	13	2.2	2.7	2.6	1.7	0.64	e0.43	0.22
2	0.09	2.2	0.80	0.99	6.3	31	2.8	5.3	1.3	0.60	e0.36	0.17
3	0.09	0.43	0.70	1.0	4.6	8.9	2.6	2.0	1.3	1.6	e0.30	0.14
4	0.09	0.28	0.66	0.92	3.6	2.6	3.1	1.8	1.8	0.91	e0.34	0.14
5	8.3	0.27	0.65	1.0	3.1	3.0	2.6	1.5	11	0.54	e2.2	0.25
6	0.36	0.29	0.84	1.5	3.1	2.5	2.0	22	2.0	0.53	e2.9	0.26
7	0.12	0.27	0.59	1.1	2.9	2.0	3.6	123	1.2	0.54	e3.7	0.25
8	0.12	0.27	0.53	1.1	2.5	1.9	25	43	1.1	0.53	e1.4	0.34
9	0.12	0.27	0.52	1.2	2.5	37	4.4	50	1.0	0.72	e0.40	0.28
10	43	0.31	0.48	1.7	5.7	3.7	2.1	5.6	2.6	1.9	e0.35	0.19
11	41	0.34	0.46	1.1	3.1	3.0	1.9	3.8	82	e0.81	e2.3	0.19
12	8.3	0.32	16	1.1	2.3	2.8	2.6	177	54	e1.4	e3.5	0.13
13	3.5	0.33	4.8	1.1	2.2	2.5	2.2	100	2.7	e1.1	e1.4	0.16
14	0.90	0.32	37	1.1	2.0	2.3	2.4	8.9	1.5	e0.70	e1.8	0.16
15	12	0.32	4.3	1.0	2.1	25	1.8	5.7	1.2	e1.3	0.40	0.13
16	6.5	0.33	85	0.95	2.0	5.4	1.8	16	0.99	e0.91	1.2	0.18
17	0.51	0.33	65	0.93	2.0	2.9	1.8	56	0.92	e2.0	0.39	3.2
18	0.35	0.34	9.0	0.93	1.9	2.6	1.6	10	0.83	e4.0	11	0.64
19	0.32	0.74	5.7	3.2	19	13	38	5.6	0.79	e2.5	1.7	9.9
20	0.33	0.37	4.0	1.6	4.6	5.8	21	4.9	0.77	e0.96	0.49	10
21	0.29	0.56	3.3	1.1	2.6	2.8	24	4.1	0.73	e0.62	0.32	0.63
22	0.25	0.36	6.7	1.1	1.9	2.5	3.6	3.7	0.70	e2.1	0.28	0.31
23	0.68	0.35	3.3	1.5	1.8	2.4	2.6	3.3	0.72	e2.8	0.77	0.21
24	19	74	2.2	5.2	1.8	5.7	2.4	4.7	0.74	e0.96	0.44	0.19
25	1.1	1.0	1.7	1.2	3.3	44	2.0	3.3	17	e0.54	0.35	0.18
26	0.51	2.4	1.2	1.1	3.2	18	1.6	2.8	1.2	e1.4	0.26	0.17
27	0.39	1.2	1.2	1.1	2.1	5.6	48	7.0	0.80	e0.93	0.19	0.17
28	0.37	16	1.2	1.1	1.8	3.8	11	5.5	0.77	e0.47	0.18	0.20
29	0.32	8.2	1.1	9.0	---	3.4	3.4	3.8	0.67	e1.3	0.25	0.16
30	0.34	13	0.97	63	---	2.9	2.8	2.4	0.67	e0.48	0.26	0.13
31	0.32	---	0.99	99	---	2.8	---	1.9	---	e0.46	0.21	---
MEAN	4.83	4.19	8.45	6.74	3.82	8.19	7.58	22.2	6.49	1.17	2.14	0.98
MAX	43	74	85	99	19	44	48	177	82	4.0	29	10
MIN	0.09	0.27	0.46	0.92	1.8	1.9	1.6	1.5	0.67	0.46	0.18	0.13

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	3.23	2.88	2.90	5.51	7.15	7.32	6.37	10.0	7.17	6.76	3.74	1.79
MAX	5.38	4.36	8.45	13.2	17.1	18.5	11.3	22.2	17.5	18.5	10.9	2.69	
(WY)	2001	1999	2002	1999	1999	1998	1998	2002	1998	1998	1998	1998	
MIN	0.50	0.95	1.22	0.90	3.82	1.71	1.23	3.27	1.66	0.32	1.05	0.56	
(WY)	1998	2000	2001	2000	2002	2000	2000	2001	1997	1997	2001	1999	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1997 - 2002
ANNUAL MEAN	3.56	6.43	5.64
HIGHEST ANNUAL MEAN			8.19
LOWEST ANNUAL MEAN			2.89
HIGHEST DAILY MEAN	85	Dec 16	381
LOWEST DAILY MEAN	0.09	Sep 26-Oct 4	0.05
ANNUAL SEVEN-DAY MINIMUM	0.09	Sep 26	0.06
MAXIMUM PEAK FLOW	---	1500 <sup>a</sup>	4800 <sup>a</sup>
MAXIMUM PEAK STAGE	---	8.56	13.10
INSTANTANEOUS LOW FLOW	---	0.09	0.05 <sup>b</sup>
10 PERCENT EXCEEDS	6.9	13	9.8
50 PERCENT EXCEEDS	0.99	1.5	1.0
90 PERCENT EXCEEDS	0.14	0.27	0.22

e Estimated

a From rating extended above 396 ft<sup>3</sup>/s.

b Minimum daily, instantaneous unknown

LOWER MISSISSIPPI RIVER BASIN

271

07001985 WATKINS CREEK AT BELLEFONTAINE NEIGHBORS, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 23...	2357	ENVIRONMENTAL	12	6.3	67	7.8	1010	16.2	260	68.5	21.0	149
DEC 11...	0920	ENVIRONMENTAL	.43	13.2	99	7.7	984	2.5	360	90.7	31.6	208
FEB 05...	0815	ENVIRONMENTAL	3.1	8.8	63	7.4	844	1.7	310	75.0	29.0	196
MAR 09...	0617	ENVIRONMENTAL	158	9.8	95	7.5	1000	12.7	110	30.0	7.50	74
MAY 29...	0815	ENVIRONMENTAL	4.4	5.5	60	7.6	677	18.5	210	58.0	16.0	136
AUG 08...	1030	ENVIRONMENTAL	e1.6	5.3	61	7.4	554	21.4	180	49.0	15.0	112

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 23...	150	183	0	--	37	E1.1	.13	.300	.01	.250	E.29	4.4	13
DEC 11...	209	255	0	142	E2	E.40	.04	.600	.02	.120	E.13	7.7	7
FEB 05...	195	238	0	150	3	9.8	7.60	.700	.06	.590	.99	14	44
MAR 09...	74	91	0	--	937	2.8	.13	.360	.04	.220	1.00	4.4	22
MAY 29...	135	165	0	--	43	.60	.10	.600	.03	.100	.15	7.2	14
AUG 08...	113	137	0	--	49	.90	.11	.710	.02	.240	.30	9.2	18

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 23...	24000	42000	5600	42	2	<1	1.0	1.0	3.7	109	<1	238	<.1
DEC 11...	210	500	114	8	1	<1	1.0	1.0	1.4	78	<1	297	<.1
FEB 05...	K800	K600	K1000	4	<1	<1	<1.0	<1.0	2.5	72	<1	656	<.1
MAR 09...	<20	16500	K6400	355	2	<1	<1.0	2.1	3.0	332	2	248	<.1
MAY 29...	2800	4200	8000	71	2	<1	<1.0	<1.0	2.3	69	<1	97	<.1
AUG 08...	<10	480	K72	<3	3	<1	<1.0	<1.0	2.6	11	<1	350	<.1

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07001985 WATKINS CREEK AT BELLEFONTAINE NEIGHBORS, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 23...	M	<2	<.01	<.009	<.01	<2	M	M	<.006	E.02	<.020	<.01	<.006
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	E1	M	<.01	<.009	<.01	<2	M	M	<.006	<.10	<.015	<.02	<.006
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER (µg/L) (34694)
OCT 23...	<4	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34396)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (39702)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (34696)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 23...	<.02	M	<1	<2	<2	<2	<2	<2	<2	<3	<5
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	E1	<1	<2	<2	<2	<2	<2	<2	<1	M
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--

e--Estimated discharge.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## LOWER MISSISSIPPI RIVER BASIN

07005000 MALINE CREEK AT BELLEFONTAINE NEIGHBORS, MO

LOCATION.--Lat 38°44'12", long 90°13'35", in SE ¼ NE ¼ NE ¼ sec.9, T.46 N., R.7 E., St. Louis County, Hydrologic Unit 07140101, on left downstream wingwall of Bellefontaine Road bridge, 2.32 mi south of Interstate 270, 0.80 mi east of Highway 367 (Lewis and Clark Blvd.), and 1.03 mi upstream of Mississippi River.

DRAINAGE AREA.--24.4 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year. Annual peaks only for 1968-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 409.96 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for estimated daily discharges and those below 1 ft<sup>3</sup>/s and above 2,600 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.10	1.3	7.8	1.9	26	4.1	4.9	6.5	4.4	1.1	0.72	0.55
2	0.12	17	4.8	1.9	12	68	5.2	12	4.1	2.3	0.56	0.66
3	0.25	2.0	3.6	2.4	10	14	3.8	4.6	3.8	9.9	0.43	0.96
4	0.28	0.58	3.1	2.6	7.5	5.6	3.2	4.3	3.3	3.8	0.65	1.1
5	34	0.54	3.0	3.4	6.0	5.4	3.1	3.4	43	1.4	4.6	1.0
6	4.3	0.57	6.2	4.7	5.7	5.9	3.0	47	8.6	1.8	193	1.7
7	0.42	0.66	2.8	3.8	5.3	4.0	4.2	312	4.0	0.87	8.6	1.1
8	0.24	0.71	1.9	2.9	4.9	3.4	49	138	3.3	0.95	5.3	2.1
9	0.34	1.4	1.7	3.3	4.7	70	12	e128	6.0	3.2	1.9	1.6
10	102	1.2	1.6	3.0	9.1	8.4	4.6	e20	14	5.6	1.6	1.3
11	135	1.7	1.6	2.4	6.2	6.3	4.2	e7.0	230	1.1	3.2	1.2
12	34	0.75	39	2.1	4.2	6.8	6.7	e450	175	2.9	6.2	1.1
13	18	1.6	17	1.9	3.6	4.8	5.1	e180	14	1.9	5.6	0.99
14	7.3	0.79	69	1.9	3.4	4.2	4.5	e18	8.1	0.83	9.2	0.83
15	22	0.64	10	1.9	3.5	48	3.4	e10	5.7	2.8	2.2	0.81
16	27	0.69	120	1.4	3.5	14	3.1	e40	4.2	1.4	0.79	1.0
17	3.2	0.68	105	1.5	3.3	6.7	2.7	e130	3.5	5.7	0.81	11
18	1.0	0.70	16	1.4	3.0	5.0	2.5	e27	3.1	24	36	6.2
19	0.53	4.2	9.5	8.6	26	30	173	e15	2.6	6.8	6.7	31
20	0.58	1.5	6.8	4.9	11	17	64	e14	2.6	1.5	2.9	32
21	0.59	0.65	5.6	2.6	5.3	6.6	59	e12	2.8	0.96	1.3	3.1
22	0.55	0.52	14	2.9	3.5	4.8	14	e12	3.8	6.4	1.3	0.91
23	1.8	0.57	6.7	3.1	3.1	5.0	9.5	39	3.9	20	3.9	0.75
24	72	180	4.4	15	3.2	9.9	8.4	16	9.8	2.5	4.2	0.79
25	8.8	7.5	3.6	3.0	6.2	89	8.3	10	50	1.1	1.1	1.5
26	1.4	8.9	3.3	2.1	12	37	4.9	8.1	6.6	12	0.79	0.71
27	0.92	7.2	3.3	2.0	4.7	15	98	15	3.2	4.0	0.76	0.65
28	0.74	41	4.1	2.0	4.1	11	28	19	3.2	0.87	0.71	0.98
29	0.74	28	2.9	17	---	8.8	10	12	1.5	3.3	0.60	1.0
30	0.73	47	2.1	118	---	7.2	7.7	6.4	1.3	0.89	0.65	1.1
31	0.81	---	2.4	182	---	5.5	---	6.8	---	0.90	0.53	---
MEAN	15.5	12.0	15.6	13.2	7.18	17.1	20.3	55.6	21.0	4.28	9.90	3.66
MAX	135	180	120	182	26	89	173	450	230	24	193	32
MIN	0.10	0.52	1.6	1.4	3.0	3.4	2.5	3.4	1.3	0.83	0.43	0.55
IN.	0.73	0.55	0.74	0.62	0.31	0.81	0.93	2.63	0.96	0.20	0.47	0.17

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	MEAN	10.1	18.2	9.27	19.3	27.1	24.3	17.4	24.0	27.4	16.2	14.9	8.35
MAX	15.5	51.7	17.2	45.3	55.5	69.3	31.0	55.6	61.2	42.7	32.9	14.0	
(WY)	2002	1997	2000	1999	1999	1998	1998	2002	1998	1998	1998	1998	
MIN	6.56	7.62	2.89	7.54	7.18	7.12	7.57	7.73	6.96	1.16	4.14	3.12	
(WY)	2000	2000	2001	2001	2002	2000	2000	2001	2001	1997	2001	1999	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL MEAN	9.20	16.4	17.8
HIGHEST ANNUAL MEAN			27.7
LOWEST ANNUAL MEAN			7.08
HIGHEST DAILY MEAN	180	Nov 24	450
LOWEST DAILY MEAN	0.06	Aug 15	0.10
ANNUAL SEVEN-DAY MINIMUM	0.13	Aug 31	0.64
MAXIMUM PEAK FLOW	---	Unknown <sup>a</sup>	May 17
MAXIMUM PEAK STAGE	---	11.85	May 17
INSTANTANEOUS LOW FLOW	---	0.08	Oct 1
ANNUAL RUNOFF (INCHES)	5.12	9.11	9.94
10 PERCENT EXCEEDS	25	36	34
50 PERCENT EXCEEDS	3.0	4.0	4.0
90 PERCENT EXCEEDS	0.26	0.74	0.74

e Estimated

<sup>a</sup> Occurred during period of backwater from the Mississippi River.

<sup>b</sup> From rating extended above 1,270 ft<sup>3</sup>/s.



07005000 MALINE CREEK AT BELLEFONTAINE NEIGHBORS, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 24...	0045	ENVIRONMENTAL	61	6.0	63	7.2	536	15.8	160	46.2	11.7	107
DEC 10...	1700	ENVIRONMENTAL	1.7	6.9	56	8.0	1050	5.7	330	89.4	26.0	197
FEB 05...	0900	ENVIRONMENTAL	6.4	11.2	82	7.8	1280	2.1	350	93.0	28.0	202
MAR 09...	0332	ENVIRONMENTAL	171	10.3	101	7.9	2120	12.8	240	65.0	19.0	120
MAY 30...	0815	ENVIRONMENTAL	6.0	5.8	67	7.6	594	20.9	330	82.0	30.0	113
AUG 08...	1130	ENVIRONMENTAL	3.9	2.9	35	7.2	436	24.1	120	36.0	8.30	75

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 24...	107	130	0	--	69	E.90	.10	.410	.02	.180	E.27	13	10
DEC 10...	198	242	0	152	E15	E.50	.10	.280	.01	.070	E.11	4.1	22
FEB 05...	205	250	0	200	68	.50	<.01	1.40	.01	.080	.14	6.6	12
MAR 09...	121	148	0	--	575	2.1	.03	.240	.02	.050	.57	2.9	<5
MAY 30...	111	136	0	--	6	.50	.08	.730	.04	.080	.09	5.0	18
AUG 08...	75	92	0	--	56	1.3	.17	1.10	.07	.260	.34	9.6	17

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 24...	7000	10600	K2480	206	2	<1	.3	.6	4.5	312	<1	232	<.1
DEC 10...	K42	46	72	10	1	<1	.1	.1	1.9	47	<1	146	<.1
FEB 05...	120	54	126	11	<1	<1	<1.0	<1.0	<1.0	24	<1	283	<.1
MAR 09...	K800	K1000	4000	185	2	<1	<1.0	3.3	3.8	163	<1	409	<.1
MAY 30...	2500	2900	1250	<3	1	<1	<1.0	<1.0	1.6	14	<1	21	<.1
AUG 08...	730	2250	300	<3	3	<1	<1.0	<1.0	3.5	6	<1	66	<.1

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07005000 MALINE CREEK AT BELLEFONTAINE NEIGHBORS, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 24...	E2	M	<.01	<.009	<.01	<2	E1	M	<.006	E.06	.016	<.01	<.006
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	E1	M	<.01	<.009	<.01	<2	M	<2	<.006	<.10	<.015	<.02	<.006
MAY 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER (µg/L) (34694)
OCT 24...	<4	<3	<2	<3	.017	<.006	.009	<3	<.01	<.1	M	E1	<3.0
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
MAY 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34396)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 24...	<.02	E2	<1	<2	M	<2	<2	<2	<2	<3	<5
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	M	<1	<2	<2	<2	<2	<2	<2	<1	<5
MAY 30...	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.



07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

## WATER-QUALITY RECORDS

## PERIOD OF RECORD.--

WATER TEMPERATURES: October 1951 to current year.

SEDIMENT RECORDS: April 1948 to current year.

REMARKS.--Sediment discharge computed from turbidity readings. Sediment records fair.

## EXTREMES FOR PERIOD OF DAILY RECORD.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 6,720 mg/L, Feb. 24, 1985; minimum daily mean, 19 mg/L, Jan. 21 and 22, 1967.

SEDIMENT LOADS: Maximum daily, 9,830,000 tons, Feb. 24, 1985; minimum daily, 2,800 tons, Jan. 21, 1967.

## EXTREMES FOR CURRENT YEAR.--

SEDIMENT CONCENTRATIONS: Maximum daily mean, 1,550 mg/L, May 9; minimum daily mean 62 mg/L, Oct. 7, Nov. 23 and Jan. 26.

SEDIMENT LOADS: Maximum daily, 2,240,000 tons, May 9; minimum daily, 14,100 tons, Jan. 26.

## SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	129000	174	60700	132000	150	53600	139000	135	50700
2	118000	134	42800	131000	138	48800	138000	98	36400
3	106000	106	30400	133000	135	48600	140000	97	36600
4	96600	86	22600	133000	130	46600	145000	108	42200
5	103000	69	19100	135000	123	44900	141000	96	36700
6	101000	70	19100	137000	119	44200	135000	104	37800
7	106000	62	17700	130000	115	40300	127000	94	32200
8	110000	70	20900	121000	106	34700	123000	91	30300
9	116000	76	24000	121000	93	30500	120000	98	31700
10	110000	75	22400	126000	84	28500	124000	99	33200
11	110000	118	34900	120000	81	26200	129000	99	34400
12	129000	191	66600	118000	74	23500	138000	103	38400
13	135000	149	54200	115000	70	21700	138000	118	43900
14	138000	165	61300	111000	71	21300	142000	168	64500
15	136000	107	39300	109000	74	21800	145000	269	105000
16	136000	112	41100	105000	66	18700	150000	214	86500
17	135000	108	39400	107000	67	19300	176000	513	244000
18	144000	111	43100	99900	65	17500	187000	388	196000
19	146000	106	41400	103000	72	19900	171000	276	127000
20	154000	125	51900	99100	69	18400	162000	253	111000
21	154000	134	55900	102000	68	18800	153000	239	98600
22	137000	127	47100	98000	69	18400	152000	183	75300
23	136000	132	48600	90600	62	15100	157000	154	65400
24	161000	160	69700	107000	121	35100	145000	136	53300
25	180000	212	103000	122000	139	45900	123000	119	39400
26	168000	197	89600	116000	109	34200	121000	115	37500
27	148000	181	72400	114000	101	31000	111000	107	32100
28	152000	170	69600	116000	94	29500	91400	101	24900
29	148000	160	63900	122000	125	41000	82700	82	18300
30	138000	147	54900	138000	126	46900	78800	80	17000
31	142000	159	61100	---	---	---	89000	72	17300

## MISSISSIPPI RIVER MAIN STEM

07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT	MEAN	MEAN	SEDIMENT
	DISCHARGE (cfs)	CONCEN- TRATION (mg/L)	DISCHARGE (tons/day)	DISCHARGE (cfs)	CONCEN- TRATION (mg/L)	DISCHARGE (tons/day)	DISCHARGE (cfs)	CONCEN- TRATION (mg/L)	DISCHARGE (tons/day)
JANUARY			FEBRUARY				MARCH		
1	89100	81	19500	234000	1070	677000	152000	129	53000
2	82900	72	16100	261000	1020	720000	156000	135	56900
3	81100	75	16500	227000	909	557000	160000	222	95800
4	81100	74	16200	196000	667	353000	149000	151	60600
5	85000	77	17800	172000	461	214000	132000	126	45100
6	89300	77	18600	158000	476	203000	117000	113	35800
7	89100	76	18400	148000	234	93500	125000	112	37800
8	87000	76	17800	138000	207	77000	134000	113	40800
9	97700	86	22800	134000	187	67600	146000	230	90700
10	99700	72	19400	137000	175	64600	157000	328	139000
11	94100	73	18500	136000	182	66800	173000	131	61400
12	99000	75	20000	133000	175	62700	176000	148	70400
13	98700	74	19600	133000	160	57400	167000	176	79300
14	100000	78	20900	137000	156	57900	163000	268	118000
15	97500	78	20600	139000	146	54900	168000	266	121000
16	91300	78	19300	134000	153	55300	174000	249	117000
17	94900	73	18800	126000	140	47500	173000	222	104000
18	89500	80	19200	124000	134	45000	167000	216	97400
19	90500	72	17500	123000	132	44000	167000	215	96700
20	89100	77	18400	118000	129	41000	169000	205	93400
21	86500	75	17500	116000	145	45400	166000	216	96700
22	81100	70	15400	132000	131	46800	167000	183	82400
23	79500	71	15300	142000	127	48500	161000	174	75500
24	89200	64	15500	155000	155	65000	163000	193	84000
25	86300	71	16500	164000	204	90300	178000	362	173000
26	84600	62	14100	160000	229	99100	172000	318	146000
27	84800	68	15500	145000	185	72600	166000	284	125000
28	85000	66	15200	146000	143	56600	164000	329	144000
29	92400	72	18000	---	---	---	175000	298	137000
30	98800	75	20000	---	---	---	170000	251	112000
31	136000	682	250000	---	---	---	158000	208	86500
APRIL			MAY				JUNE		
1	145000	165	62900	408000	694	764000	351000	353	335000
2	139000	146	53000	402000	632	686000	329000	326	289000
3	148000	152	58800	387000	519	542000	327000	315	278000
4	151000	150	58600	377000	334	340000	323000	267	233000
5	154000	136	54500	363000	256	251000	311000	281	236000
6	155000	131	52400	350000	380	359000	305000	287	237000
7	158000	132	53700	368000	667	663000	317000	289	247000
8	164000	149	62600	428000	868	1000000	329000	295	262000
9	179000	179	82100	534000	1550	2240000	340000	312	287000
10	207000	216	115000	566000	1290	1970000	352000	350	333000
11	220000	301	170000	577000	1110	1730000	364000	445	438000
12	217000	352	196000	581000	1350	2120000	391000	782	826000
13	204000	345	180000	609000	1180	1940000	418000	708	800000
14	207000	320	170000	640000	1120	1930000	453000	1070	1310000
15	203000	298	155000	662000	1090	1940000	460000	964	1200000
16	197000	287	146000	676000	1100	2010000	452000	681	832000
17	205000	306	162000	679000	852	1560000	436000	515	607000
18	207000	360	193000	664000	939	1680000	417000	444	499000
19	212000	358	198000	639000	614	1060000	394000	378	402000
20	224000	589	347000	602000	563	915000	366000	320	316000
21	249000	687	450000	562000	527	800000	334000	399	359000
22	293000	669	518000	525000	484	685000	310000	415	347000
23	304000	764	615000	489000	351	464000	293000	374	296000
24	305000	725	587000	450000	329	400000	275000	308	229000
25	321000	796	681000	426000	317	365000	269000	254	184000
26	316000	858	723000	419000	287	325000	262000	226	160000
27	308000	832	685000	421000	277	315000	252000	224	152000
28	330000	588	520000	438000	527	623000	244000	193	127000
29	370000	737	724000	437000	563	664000	240000	173	112000
30	399000	578	621000	417000	428	481000	238000	167	107000
31	---	---	---	388000	388	406000	---	---	---

## 07010000 MISSISSIPPI RIVER AT ST. LOUIS, MO--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
JULY			AUGUST			SEPTEMBER			
1	227000	163	100000	136000	86	31500	172000	162	75400
2	219000	133	78400	129000	85	29700	163000	162	71400
3	217000	155	91000	122000	73	24000	156000	140	59100
4	213000	144	82700	121000	75	24600	144000	125	48700
5	209000	146	82700	117000	74	23300	133000	101	36300
6	204000	125	69100	116000	90	28300	126000	96	32600
7	200000	103	55700	116000	92	28900	120000	84	27100
8	193000	101	52400	119000	83	26700	120000	83	26900
9	188000	98	49800	110000	76	22600	121000	81	26600
10	184000	87	43100	110000	72	21400	119000	77	24800
11	183000	88	43300	114000	80	24500	117000	77	24300
12	188000	98	49900	110000	80	23600	123000	80	26500
13	189000	101	51300	116000	87	27300	125000	81	27300
14	183000	92	45600	127000	77	26300	124000	81	27000
15	174000	94	44200	129000	73	25500	124000	84	28200
16	161000	113	49100	128000	73	25100	123000	84	28000
17	149000	90	36100	134000	71	25700	e121000	85	27800
18	150000	113	46000	131000	74	26100	e123000	90	29700
19	146000	82	32300	126000	80	27300	e126000	104	35300
20	143000	80	31000	151000	153	62500	e129000	162	56500
21	154000	78	32200	153000	159	64600	e125000	145	48900
22	155000	88	36700	151000	148	60200	e116000	82	25500
23	151000	82	33500	149000	119	47700	e110000	89	26400
24	152000	85	35000	190000	156	80200	e109000	89	26200
25	148000	72	28800	219000	183	108000	e110000	93	27600
26	146000	80	31400	215000	186	108000	e105000	92	26100
27	139000	95	35700	208000	176	98700	e97700	95	25000
28	138000	86	32000	197000	168	89200	e90600	94	22900
29	132000	91	32600	187000	166	83600	e91200	86	21100
30	141000	87	33200	185000	128	64200	e95300	102	27300
31	142000	85	32600	181000	121	59100	---	---	---

e Estimated

## LOWER MISSISSIPPI RIVER BASIN

07010022 RIVER DES PERES NEAR UNIVERSITY CITY, MO

LOCATION.--Lat 38°40'07", long 90°19'26", St. Louis County, Hydrologic Unit 07140101, on top of left downstream abutment of Purdue Ave. bridge, 3.78 mi south of Interstate 70, and 2.01 mi east of Interstate 170.

DRAINAGE AREA.--8.94 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 491.97 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for discharges below 1 ft<sup>3</sup>/s and above 1,400 ft<sup>3</sup>/s, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.47	2.1	0.08	14	0.36	0.52	0.70	0.31	0.08	0.02	0.08
2	0.06	9.4	1.5	0.32	2.9	71	2.3	0.49	0.95	0.67	0.08	0.09
3	0.00	0.40	0.64	0.05	1.8	8.6	0.52	0.27	0.19	1.6	0.10	0.16
4	0.00	0.10	0.39	0.04	1.3	1.7	0.42	0.92	0.45	0.46	0.10	0.14
5	50	0.09	0.57	0.07	0.65	2.7	0.38	0.23	45	0.09	5.5	0.12
6	1.4	0.09	3.0	1.7	0.57	1.3	0.36	43	1.3	0.08	160	0.12
7	0.17	0.08	0.43	0.84	0.51	0.68	4.5	248	0.41	0.06	0.38	0.11
8	0.12	0.10	0.24	0.68	0.41	0.58	49	102	0.30	0.08	0.05	0.10
9	0.14	0.10	0.16	2.3	0.34	80	3.8	148	0.90	0.05	0.03	0.13
10	136	0.11	0.09	0.72	5.2	2.2	0.81	5.8	7.8	0.06	0.02	0.15
11	155	0.12	0.06	0.08	0.87	1.0	0.36	1.4	267	3.8	0.68	0.19
12	17	0.06	48	0.41	0.51	0.72	13	155	233	6.7	1.6	0.14
13	24	0.08	5.6	0.09	0.45	0.42	0.55	150	2.8	1.2	2.4	0.16
14	6.9	0.13	62	0.31	0.41	0.28	0.92	8.1	0.52	0.07	3.5	0.15
15	49	0.07	8.6	0.12	0.42	52	0.40	2.6	0.23	0.04	0.28	0.20
16	19	0.04	149	0.06	0.41	4.5	0.41	29	0.18	41	0.06	0.19
17	1.1	0.06	106	0.06	0.32	1.3	0.86	117	0.18	2.5	0.07	56
18	0.38	0.73	6.7	0.05	0.27	0.72	0.38	9.7	0.13	34	58	1.6
19	0.28	1.4	2.2	4.5	32	31	238	2.3	0.35	1.3	0.79	39
20	0.22	0.06	1.1	0.93	4.8	10	39	1.2	0.18	0.14	0.20	35
21	0.19	0.03	0.73	1.1	0.72	1.3	41	0.70	0.07	0.06	0.50	0.89
22	1.5	0.02	10	0.52	0.13	0.51	4.1	0.53	0.08	65	0.15	0.25
23	13	0.02	1.2	7.5	1.1	0.42	1.3	0.45	0.07	14	3.4	0.14
24	93	188	0.46	6.6	0.07	15	12	6.9	5.4	0.35	0.47	0.08
25	2.5	0.85	0.33	0.34	3.7	95	1.2	0.92	22	0.05	0.19	0.06
26	0.35	6.7	0.32	0.16	2.7	35	0.49	0.44	0.76	0.78	0.17	0.05
27	0.11	0.82	0.45	0.13	0.87	5.2	117	10	0.14	0.11	0.16	0.10
28	1.9	44	0.41	0.12	0.39	2.1	14	47	0.12	0.06	0.12	0.09
29	0.08	28	0.18	15	---	1.6	2.2	2.5	0.06	0.05	0.11	0.08
30	0.10	44	0.08	143	---	0.90	1.3	0.80	0.06	0.05	0.11	0.09
31	0.08	---	0.05	196	---	0.60	---	0.68	---	0.02	0.09	---
MEAN	18.5	10.9	13.3	12.4	2.78	13.8	18.4	35.4	19.7	5.63	7.72	4.52
MAX	155	188	149	196	32	95	238	248	267	65	160	56
MIN	0.00	0.02	0.05	0.04	0.07	0.28	0.36	0.23	0.06	0.02	0.02	0.05

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	6.79	5.91	5.35	9.78	12.2	12.4	10.6	17.6	23.5	8.13	5.61	4.64
MAX	18.5	10.9	13.3	20.9	27.7	33.4	18.4	35.4	34.9	20.1	8.29	8.19	
(WY)	2002	2002	2002	1999	1999	1998	2002	2002	2000	1998	2000	2001	
MIN	3.11	1.17	1.23	2.36	2.78	3.61	3.81	4.20	5.46	0.87	0.95	1.29	
(WY)	1998	2000	1999	2000	2002	2000	2000	1999	2001	2001	2001	1999	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1997 - 2002

ANNUAL MEAN	7.98	13.7	10.2
HIGHEST ANNUAL MEAN			13.7
LOWEST ANNUAL MEAN			5.55
HIGHEST DAILY MEAN	188	Nov 24	711
LOWEST DAILY MEAN	0.00	Many Days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	Jul 25, Sep 24	0.00
MAXIMUM PEAK FLOW	---		4070 <sup>a</sup>
MAXIMUM PEAK STAGE	---		13.51
INSTANTANEOUS LOW FLOW	---		0.00
10 PERCENT EXCEEDS	19	42	20
50 PERCENT EXCEEDS	0.44	0.52	0.29
90 PERCENT EXCEEDS	0.00	0.06	0.00

<sup>a</sup> From rating extended above 653 ft<sup>3</sup>/s.



07010022 RIVER DES PERES NEAR UNIVERSITY CITY, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 24...	1322	ENVIRONMENTAL	593	8.9	89	7.5	73	13.6	35	11.2	1.78	48
DEC 11...	1350	ENVIRONMENTAL	.07	4.2	34	7.6	1000	5.8	280	73.8	22.5	184
FEB 04...	1048	ENVIRONMENTAL	1.3	12.1	88	7.8	1600	1.8	340	93.0	25.0	216
04...	1049	REPLICATE	--	--	--	--	--	--	380	107	28.0	--
MAR 09...	0217	ENVIRONMENTAL	157	7.7	78	7.6	2100	14.2	140	41.0	9.20	80
25...	0300	ENVIRONMENTAL	717	12.2	97	7.5	214	4.3	--	--	--	35
MAY 30...	0955	ENVIRONMENTAL	.81	6.6	75	7.6	780	20.2	270	80.0	16.0	170
AUG 08...	1440	ENVIRONMENTAL	.06	8.8	113	8.2	627	27.6	180	56.0	9.60	115

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (00507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 24...	45	54	0	--	633	E2.0	.21	.230	.01	.220	E.86	2.6	26
DEC 11...	184	225	0	131	E28	E4.3	1.90	<.020	<.01	.130	E.34	9.6	77
FEB 04...	217	265	0	290	<1	2.1	.62	1.60	.09	.130	.25	6.3	26
04...	--	--	--	290	<1	2.1	.62	1.60	.09	.130	.25	--	28
MAR 09...	79	97	0	--	380	5.2	.23	.230	.03	.130	.93	4.3	52
25...	34	41	0	--	--	--	--	--	--	--	--	2.3	--
MAY 30...	170	207	0	--	4	2.1	.72	.520	.07	.150	.21	7.9	26
AUG 08...	114	139	0	--	12	.90	.12	.160	.02	.080	.13	1.6	27

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 24...	K200000	K120000	134000	188	1	<1	1.0	1.3	5.2	330	5	84	.1
DEC 11...	K47	500	600	3	2	<1	1.0	1.0	9.2	325	<1	998	<.1
FEB 04...	1600	K6650	4200	<3	<1	<1	<1.0	<1.0	24.0	50	<1	649	<.1
04...	--	--	--	<3	1	<1	<1.0	<1.0	30.0	56	<1	722	<.1
MAR 09...	K9500	56000	K5600	245	2	<1	<1.0	3.1	6.8	252	2	363	<.1
25...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 30...	7000	12600	2680	3	2	<1	<1.0	<1.0	4.9	112	<1	111	<.1
AUG 08...	120	920	124	11	3	<1	<1.0	<1.0	3.4	46	<1	129	<.1

LOWER MISSISSIPPI RIVER BASIN

07010022 RIVER DES PERES NEAR UNIVERSITY CITY, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible][illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## LOWER MISSISSIPPI RIVER BASIN

07010022 RIVER DES PERES NEAR UNIVERSITY CITY, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 24...	<.02	7	<1	<2	<2	M	<2	<2	<3	M
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	--	<1	--	--	--	--	--	--	--
25...	--	E2	--	<2	<2	M	<2	<2	<1	<5
MAY 30...	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## 07010030 RIVER DES PERES TRIBUTARY AT PAGEDALE, MO

LOCATION.--Lat 38°40'37", long 90°18'53", St. Louis County, Hydrologic Unit 07140101, on right culvert wall next to sidewalk handrail at Page Ave., 3.04 mi south of Interstate 70, and 2.37 mi east of Interstate 170.

DRAINAGE AREA.--2.01 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 504.56 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.16	0.52	0.14	3.1	0.17	0.24	0.31	0.70	0.08	0.08	0.05
2	0.00	0.92	0.37	0.12	0.99	7.3	0.32	0.25	0.56	0.06	0.08	0.05
3	0.00	0.07	0.30	0.11	0.68	1.5	0.38	0.19	0.50	0.06	0.08	0.04
4	0.00	0.03	0.26	0.11	0.43	0.89	0.16	0.19	0.49	0.06	0.12	0.04
5	5.6	0.03	0.40	0.13	0.33	0.76	0.15	0.16	2.6	0.08	2.3	0.04
6	0.11	0.02	0.39	0.19	0.31	0.68	0.14	4.3	0.58	0.07	73	0.05
7	0.01	0.02	0.26	0.14	0.28	0.51	0.34	58	0.46	0.04	0.52	0.05
8	0.00	0.02	0.25	0.16	0.25	0.48	6.2	16	0.42	0.03	0.22	0.06
9	0.04	0.02	0.25	0.16	0.22	12	0.37	24	0.80	0.02	0.13	0.06
10	18	0.02	0.24	0.14	0.45	0.97	0.17	1.5	0.87	0.03	0.09	0.06
11	28	0.02	0.22	0.12	0.20	0.67	0.16	0.86	79	1.8	0.17	0.89
12	2.3	0.02	4.7	0.11	0.18	0.57	1.1	23	57	1.7	0.55	0.07
13	3.5	0.02	1.0	0.12	0.15	0.49	0.17	30	1.6	0.11	0.33	0.93
14	0.34	0.04	9.4	0.12	0.14	0.42	0.18	2.0	0.77	0.06	0.40	0.06
15	6.3	0.05	1.5	0.11	0.14	6.3	0.13	0.94	0.53	0.05	0.15	0.06
16	1.7	0.05	19	0.10	0.15	1.1	0.12	3.7	0.40	2.3	0.08	0.06
17	0.17	0.06	16	0.10	0.16	0.58	0.10	23	0.34	0.24	0.08	1.6
18	0.09	0.21	1.5	0.11	0.16	0.43	0.09	4.0	0.31	1.7	6.1	0.24
19	0.06	0.25	0.72	0.50	3.4	2.5	27	1.9	0.27	0.19	0.37	2.6
20	0.05	0.10	0.52	0.15	0.50	1.2	7.4	1.4	0.24	0.08	0.20	3.5
21	0.05	0.10	0.43	0.22	0.20	0.49	4.5	1.1	0.20	0.07	0.15	0.28
22	0.05	0.10	0.88	0.14	0.17	0.37	0.63	1.0	0.17	6.5	0.13	0.19
23	1.2	0.16	0.38	0.76	0.16	0.34	0.32	0.89	0.15	1.1	0.42	0.13
24	11	30	0.31	0.40	0.16	1.7	1.3	1.6	0.14	0.19	0.18	0.12
25	0.62	0.40	0.29	0.10	0.42	13	0.21	0.80	1.1	0.12	0.09	0.12
26	0.27	0.65	0.25	0.09	0.31	3.6	0.15	0.71	0.20	0.14	0.09	0.12
27	0.17	0.30	0.24	0.09	0.21	1.1	17	3.6	0.12	0.18	0.07	0.11
28	0.15	4.3	0.23	0.09	0.16	0.63	1.9	17	0.10	0.16	0.07	0.11
29	0.14	2.9	0.18	1.4	---	0.47	0.55	1.7	0.09	0.15	0.06	0.11
30	0.13	5.6	0.18	18	---	0.35	0.38	0.98	0.08	0.08	0.05	0.11
31	0.12	---	0.17	32	---	0.30	---	0.81	---	0.08	0.05	---
MEAN	2.59	1.56	1.98	1.81	0.50	2.00	2.39	7.29	5.03	0.56	2.79	0.40
MAX	28	30	19	32	3.4	13	27	58	79	6.5	73	3.5
MIN	0.00	0.02	0.17	0.09	0.14	0.17	0.09	0.16	0.08	0.02	0.05	0.04

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	0.93	0.90	0.75	1.72	2.46	2.22
MAX	2.59	1.55	1.98	4.50	7.35	6.56
(WY)	2002	2002	2002	1999	1999	1998
MIN	0.39	0.12	0.33	0.32	0.50	0.37
(WY)	2000	2000	1999	2000	2002	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1997 - 2002
ANNUAL MEAN	1.04	2.42	1.76
HIGHEST ANNUAL MEAN			2.53
LOWEST ANNUAL MEAN			0.69
HIGHEST DAILY MEAN			148
LOWEST DAILY MEAN	0.00	0.00	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	0.02	0.00
MAXIMUM PEAK FLOW	---	1290 <sup>a</sup>	2490 <sup>a</sup>
MAXIMUM PEAK STAGE	---	7.52	8.84
INSTANTANEOUS LOW FLOW	---	0.00	0.00
10 PERCENT EXCEEDS	1.8	4.1	2.4
50 PERCENT EXCEEDS	0.21	0.24	0.21
90 PERCENT EXCEEDS	0.00	0.05	0.05

<sup>a</sup> From rating extended above 48 ft<sup>3</sup>/s.

## LOWER MISSISSIPPI RIVER BASIN

07010035 ENGELHOLM CREEK NEAR WELLSTON, MO

LOCATION.--Lat 38°40'57", long 90°18'10", in NW ¼ NE ¼ SE ¼ sec.3, T.45 N., R.6 E., St. Louis County, Hydrologic Unit 07140101, on right downstream wingwall of Kingsland Ave. bridge, 2.70 mi south of Interstate 70, and 2.78 mi east of Interstate 170.

DRAINAGE AREA.--1.40 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1998 to current year. May 1997 to April 1998 published as Engelholm Creek at Pagedale (07010034).

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Water-discharge records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.06	0.10	0.38	0.22	2.7	0.34	0.57	0.73	0.31	0.12	0.06	0.28
2	0.06	0.21	0.28	0.22	1.1	6.3	0.68	0.60	0.28	0.12	0.06	0.12
3	0.06	0.09	0.25	0.22	0.83	1.5	0.44	0.45	0.25	0.12	0.05	0.12
4	0.06	0.08	0.22	0.22	0.54	1.0	0.40	0.43	0.24	0.11	0.05	0.10
5	2.5	0.08	0.26	0.20	0.46	0.71	0.43	0.39	1.4	0.10	2.8	0.08
6	0.06	0.08	0.26	0.23	0.46	0.60	0.40	3.6	0.56	0.09	28	0.08
7	0.04	0.08	0.18	0.21	0.42	0.54	0.62	20	0.24	0.08	0.17	0.08
8	0.04	0.09	0.15	0.19	0.39	0.47	4.6	9.9	0.23	0.07	0.09	0.08
9	0.05	0.10	0.12	0.20	0.38	7.9	0.94	11	0.33	0.07	0.08	0.08
10	8.2	0.09	0.12	0.20	0.59	0.90	0.56	1.6	0.55	0.09	0.07	0.09
11	12	0.09	0.11	0.18	0.37	0.70	0.49	1.0	24	0.25	0.12	0.45
12	1.9	0.08	4.1	0.19	0.35	0.61	1.1	9.3	21	0.24	0.39	0.12
13	1.3	0.08	0.80	0.17	0.32	0.50	0.46	16	1.2	0.08	0.14	0.12
14	0.16	0.08	7.0	0.18	0.32	0.47	0.52	2.0	0.45	0.07	0.16	0.13
15	2.5	0.08	1.4	0.15	0.32	5.3	0.43	1.2	0.33	0.07	0.08	0.14
16	1.1	0.07	14	0.15	0.32	1.3	0.39	3.2	0.27	0.61	0.07	0.12
17	0.11	0.07	11	0.15	0.31	0.80	0.35	12	0.25	0.12	0.06	0.89
18	0.09	0.08	1.4	0.15	0.31	0.65	0.34	2.7	0.24	0.60	3.9	0.19
19	0.08	0.11	0.68	0.32	3.0	3.3	17	1.2	0.21	0.10	0.15	1.6
20	0.08	0.09	0.45	0.21	0.80	1.8	6.8	0.78	0.20	0.07	0.11	2.3
21	0.08	0.09	0.40	0.18	0.40	0.83	4.7	0.62	0.20	0.07	0.09	0.20
22	0.07	0.08	0.80	0.18	0.34	0.64	1.5	0.53	0.19	3.5	0.08	0.18
23	0.27	0.06	0.35	0.56	0.34	0.64	0.98	0.45	0.19	0.51	0.17	0.14
24	4.1	13	0.30	0.47	0.34	1.8	1.4	1.2	0.39	0.06	0.10	0.17
25	0.17	0.40	0.29	0.16	0.60	9.0	0.64	0.54	0.57	0.05	0.08	0.15
26	0.10	0.67	0.27	0.15	0.46	4.1	0.49	0.38	0.17	0.17	0.08	0.14
27	0.09	0.30	0.27	0.15	0.37	1.6	9.2	1.7	0.17	0.06	0.08	0.15
28	0.10	4.0	0.27	0.15	0.35	1.1	2.9	5.1	0.16	0.06	0.07	0.16
29	0.10	3.0	0.24	1.4	---	0.96	1.1	1.0	0.14	0.05	0.09	0.16
30	0.10	4.8	0.24	11	---	0.75	0.86	0.44	0.14	0.05	0.10	0.15
31	0.10	---	0.24	18	---	0.64	---	0.35	---	0.05	0.10	---
MEAN	1.15	0.94	1.51	1.17	0.62	1.86	2.04	3.56	1.83	0.25	1.22	0.29
MAX	12	13	14	18	3.0	9.0	17	20	24	3.5	28	2.3
MIN	0.04	0.06	0.11	0.15	0.31	0.34	0.34	0.35	0.14	0.05	0.05	0.08

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	MEAN	0.68	0.76	0.74	1.26	1.41	0.99	1.05	1.70	1.45	0.93	0.75	0.45
MAX	1.15	1.39	1.51	3.14	3.29	1.86	2.04	3.56	2.29	2.86	1.40	0.86	
(WY)	2002	1999	2002	1999	1999	2002	2002	2002	2000	1998	1998	1998	
MIN	0.42	0.22	0.30	0.34	0.62	0.38	0.36	0.56	0.28	0.22	0.10	0.21	
(WY)	2001	2000	2001	2001	2002	2000	2000	2001	2001	2001	2001	1999	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1998 - 2002
ANNUAL MEAN	0.60	1.38	0.95
HIGHEST ANNUAL MEAN			1.38
LOWEST ANNUAL MEAN			0.40
HIGHEST DAILY MEAN	14 Dec 16	28 Aug 6	48 Feb 7 1999
LOWEST DAILY MEAN	0.04 Several Days	0.04 Oct 7,8	0.04 Several Days 2001,2002
ANNUAL SEVEN-DAY MINIMUM	0.04 Aug 31	0.05 Jul 29	0.04 Aug 31 2001
MAXIMUM PEAK FLOW	---	486 <sup>a</sup> Aug 6	486 <sup>a</sup> Aug 6 2002
MAXIMUM PEAK STAGE	---	8.61 Aug 6	8.88 Jul 22 1998
INSTANTANEOUS LOW FLOW	---	0.04 Oct 7-9	0.03 Sep 24 2001
10 PERCENT EXCEEDS	1.0	3.2	1.6
50 PERCENT EXCEEDS	0.17	0.28	0.23
90 PERCENT EXCEEDS	0.05	0.08	0.09

<sup>a</sup> From rating extended above 52 ft<sup>3</sup>/s.

LOWER MISSISSIPPI RIVER BASIN

289

07010035 ENGELHOLM CREEK NEAR WELLSTON, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--October 1997 to current year.

REMARKS.--Published as Engelholm Creek at Pagedale (07010034) October 1997 to September 1998.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 24...	1320	ENVIRONMENTAL	44	8.1	84	7.5	140	15.1	54	16.2	3.27	75
DEC 11...	1255	ENVIRONMENTAL	.11	9.6	83	7.8	784	8.2	270	65.6	24.7	150
FEB 05...	1230	ENVIRONMENTAL	.46	13.1	102	7.6	903	4.3	270	73.0	22.0	159
APR 08...	0711	ENVIRONMENTAL	22	8.5	79	7.7	429	10.8	92	26.0	6.50	60
MAY 29...	1300	ENVIRONMENTAL	.79	7.7	85	7.9	606	18.5	240	65.0	20.0	148
AUG 08...	1400	ENVIRONMENTAL	.10	3.0	36	7.5	479	23.9	210	56.0	17.0	127

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 24...	72	88	0	--	825	E1.7	.03	.270	.01	.140	E.77	4.6	22
DEC 11...	150	184	0	75.1	<1	E1.1	.34	.830	.09	.160	E.18	4.1	19
FEB 05...	157	191	0	100	4	.90	.12	1.70	.02	.080	.10	8.5	12
APR 08...	60	73	0	--	169	1.3	.16	.420	<.01	.220	.27	2.3	11
MAY 29...	150	183	0	--	38	.80	.18	.800	.06	.120	.18	3.6	18
AUG 08...	128	156	0	--	2	1.0	.29	.640	.08	.170	.19	7.4	14

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STREP, MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 24...	16000	17000	20500	285	1	<1	1.0	1.3	6.6	483	10	94	.1
DEC 11...	42	480	52	<3	<1	1	1.0	1.0	1.6	83	<1	208	<.1
FEB 05...	K2	32	K1	4	<1	<1	<1.0	<1.0	1.5	27	<1	245	<.1
APR 08...	3100	9200	7200	425	1	<1	<1.0	1.4	4.8	327	2	98	<.1
MAY 29...	790	K870	K1370	100	2	<1	<1.0	<1.0	2.7	116	<1	218	<.1
AUG 08...	4400	K3050	3050	3	2	<1	<1.0	<1.0	2.6	26	<1	159	<.1

WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NICKEL, DIS- SOLVED (µg/L as Ni) (01065)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	SILVER, DIS- SOLVED (µg/L as Ag) (01075)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	OIL AND GREASE, TOTAL RECOV- GRAVI- METRIC (mg/L) (00556)	1,2,5,6 -DIBENZ -ANTHRA -CENE TOTAL (µg/L) (34556)	1,2-DI- PHENYL- HYDRA- ZINE WATER TOT.REC (µg/L) (82626)	2,4,6- TRI- CHLORO- PHENOL TOTAL (µg/L) (34621)	2,4-DI- METHYL- PHENOL TOTAL (µg/L) (34606)	2,4-DI- CHLORO- PHENOL TOTAL (µg/L) (34601)	2,4,- DI- NITRO- PHENOL TOTAL (µg/L) (34616)	2,4-DI- NITRO- TOLUENE TOTAL (µg/L) (34611)	2,6-DI- NITRO- TOLUENE TOTAL (µg/L) (34626)
	OCT 24...	3.0	<1	<1.0	32	E3	M	<2	<3	<3.0	<3	<20	<3
DEC 11...	2.0	1	.1	11	--	--	--	--	--	--	--	--	--
FEB 05...	1.8	2	<1.0	111	--	--	--	--	--	--	--	--	--
APR 08...	1.5	<1	<1.0	159	<7	<3	<2	<3	<.7	<3	<3	<3	<2
MAY 29...	3.2	<1	<1.0	106	--	--	--	--	--	--	--	--	--
AUG 08...	3.5	2	<1.0	4	--	--	--	--	--	--	--	--	--
DATE	2- CHLORO- NAPH- THALENE TOTAL (µg/L) (34581)	2- CHLORO- PHENOL TOTAL (µg/L) (34586)	2- NITRO- PHENOL TOTAL (µg/L) (34591)	3,3'- DI- CHLORO- BENZI- DINE TOTAL (µg/L) (34631)	4,6- DINITRO -ORTHO- CRESOL TOTAL (µg/L) (34657)	4- BROMO- PHENYL ETHER TOTAL (µg/L) (34636)	4- CHLORO- PHENYL ETHER TOTAL (µg/L) (34641)	4- NITRO- PHENOL TOTAL (µg/L) (34646)	ACE- NAPHTH- ENE TOTAL (µg/L) (34205)	ACE- NAPHTH- YLENE TOTAL (µg/L) (34200)	ALDRIN, TOTAL (µg/L) (39330)	ANTHRA- CENE TOTAL (µg/L) (34220)	BENZENE NITRO- WATER UNFLTRD RECOVER TOTAL (µg/L) (34447)
OCT 24...	<2	<2	<3	<3	<3	<2	<2	<3	M	M	<.01	M	<2
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 08...	<2	<2	<1	<5	<3	<2	<2	<3	M	M	<.01	M	<2
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	BENZI- DINE TOTAL (µg/L) (39120)	BENZO- A- PYRENE TOTAL (µg/L) (34247)	BENZO B FLUOR- AN- THENE TOTAL (µg/L) (34230)	BENZO K FLUOR- AN- THENE TOTAL (µg/L) (34242)	BENZO- [A]- ANTHRA- CENE WAT UNF (µg/L) (34526)	BENZO- [GHI]- PERY- LENE TOTAL (µg/L) (34521)	BIS(2- CHLORO- ETHOXY) METHANE TOTAL (µg/L) (34278)	BIS(2- CHLORO- ETHYL) ETHER UNFLTRD RECOVER (µg/L) (34273)	BIS(2- CHLORO- ISO- PROPYL) ETHER TOTAL (µg/L) (34283)	BIS(2- ETHYL HEXYL) PHTHAL- ATE TOTAL (µg/L) (39100)	CARBO- PHENO- THION WATER UNFLTRD (µg/L) (39786)	CHLOR- DANE, TECH- NICAL TOTAL (µg/L) (39350)	CHLOR- PYRIFOS TOTAL RECOVER (µg/L) (38932)
OCT 24...	<40	E2	3	E1	E2	E2	<3	<2	<2	E2	<.02	E.1	E.01
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 08...	<40	M	E1	M	M	M	<3	<2	<2	E4	<.02	<.1	<.01
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	CHRY- SENE TOTAL (µg/L) (34320)	CYCLOPE NTADIEN HEXA- CHLORO- UNFLTRD RECOVER (µg/L) (34386)	DEF TOTAL (µg/L) (39040)	DI- AZINON, TOTAL (µg/L) (39570)	DI- ELDRIN TOTAL (µg/L) (39380)	DIETHYL PHTHAL- ATE TOTAL (µg/L) (34336)	DI- METHYL PHTHAL- ATE TOTAL (µg/L) (34341)	DI-N- BUTYL PHTHAL- ATE TOTAL (µg/L) (39110)	DI-N- OCTYL PHTHAL- ATE TOTAL (µg/L) (34596)	DISUL- FOTON UNFILTR RECOVER (µg/L) (39011)	ENDO- SULFAN I TOTAL (µg/L) (39388)	ENDRIN WATER UNFLTRD REC (µg/L) (39390)	ETHION, TOTAL (µg/L) (39398)
OCT 24...	3	<2	<.02	<.02	E.005	M	M	M	<5	<.10	<.02	<.01	<.01
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 08...	E1	<4	<.02	E.02	<.006	M	M	M	<5	<.10	<.02	<.01	<.01
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--



07010035 ENGELHOLM CREEK NEAR WELLSTON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 24...	5	M	<.01	<.009	<.01	<2	E2	M	<.006	E.03	<.020	<.01	<.006
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 08...	2	M	<.01	<.009	<.01	<2	M	M	<.006	<.10	<.020	<.02	<.006
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFLTR RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFLTR RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFLTR. WATER (µg/L) (34694)
OCT 24...	<4	<3	<2	<3	E.005	<.006	<.009	<3	<.01	<.1	E1	3	<3.0
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 08...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	E2	E.1
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 08...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	ETHANE HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (34696)	NAPHTH- ALENE TOTAL (µg/L)
OCT 24...	<.02	4	<1	<2	<2	<2	<2	<2	<3	M	
DEC 11...	--	--	--	--	--	--	--	--	--	--	
FEB 05...	--	--	--	--	--	--	--	--	--	--	
APR 08...	<.02	E2	<1	<2	<2	M	<2	<2	<1	M	
MAY 29...	--	--	--	--	--	--	--	--	--	--	
AUG 08...	--	--	--	--	--	--	--	--	--	--	

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## LOWER MISSISSIPPI RIVER BASIN

07010075 DEER CREEK AT LADUE, MO

LOCATION.--Lat 38°36'58", long 90°21'50", St. Louis County, Hydrologic Unit 07140101, on left upstream bank at bridge to Rock Hill Quarry, on McCarthy Construction Company complex, 5 mi east of I-270, 0.93 mi south of Highway 64/40, 0.17 mi west of McKnight.

DRAINAGE AREA.--21.4 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 31, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Water-discharge records fair except for discharges below 1 ft<sup>3</sup>/s and above 800 ft<sup>3</sup>/s, which are poor.

EXTREMES FOR CURRENT YEAR.--For the period May 31 to Sept. 30, maximum discharge, 4,100 ft<sup>3</sup>/s (from rating extended above 364 ft<sup>3</sup>/s) Sept. 9, gage height 12.24 ft; minimum, 0.00 ft<sup>3</sup>/s, many days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	0.87	1.4	0.00	0.00
2	---	---	---	---	---	---	---	---	0.0	5.8	2.7	0.00
3	---	---	---	---	---	---	---	---	13	0.16	18	0.00
4	---	---	---	---	---	---	---	---	28	40	0.0	0.00
5	---	---	---	---	---	---	---	---	2.3	1.9	0.00	0.00
6	---	---	---	---	---	---	---	---	48	0.0	0.00	0.00
7	---	---	---	---	---	---	---	---	0.71	0.00	0.00	0.00
8	---	---	---	---	---	---	---	---	0.0	0.00	0.00	85
9	---	---	---	---	---	---	---	---	0.00	0.00	0.00	187
10	---	---	---	---	---	---	---	---	0.00	0.00	0.00	2.1
11	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.52
12	---	---	---	---	---	---	---	---	0.00	4.0	0.00	0.24
13	---	---	---	---	---	---	---	---	0.00	0.09	0.00	0.02
14	---	---	---	---	---	---	---	---	3.5	0.00	0.00	0.00
15	---	---	---	---	---	---	---	---	25	0.00	0.00	0.00
16	---	---	---	---	---	---	---	---	0.03	0.00	0.00	0.00
17	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
18	---	---	---	---	---	---	---	---	0.00	57	0.00	73
19	---	---	---	---	---	---	---	---	0.00	6.5	0.00	4.0
20	---	---	---	---	---	---	---	---	88	28	0.00	0.21
21	---	---	---	---	---	---	---	---	26	1.1	0.00	0.44
22	---	---	---	---	---	---	---	---	1.3	0.04	0.00	0.05
23	---	---	---	---	---	---	---	---	0.01	0.46	0.03	0.00
24	---	---	---	---	---	---	---	---	0.00	18	2.0	0.00
25	---	---	---	---	---	---	---	---	0.00	0.04	0.01	0.00
26	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
27	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00
28	---	---	---	---	---	---	---	---	0.39	0.00	0.00	0.00
29	---	---	---	---	---	---	---	---	0.09	0.00	0.00	0.00
30	---	---	---	---	---	---	---	---	15	0.00	0.00	0.00
31	---	---	---	---	---	---	---	17	---	0.00	0.00	---
MEAN	---	---	---	---	---	---	---	---	8.41	5.31	0.73	11.8
MAX	---	---	---	---	---	---	---	---	88	57	18	187
MIN	---	---	---	---	---	---	---	---	0.00	0.00	0.00	0.00

## 293

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR MAY 2001 TO SEPTEMBER 2001

[illegible]

## LOWER MISSISSIPPI RIVER BASIN

07010075 DEER CREEK AT LADUE, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR MAY 2001 TO SEPTEMBER 2001

Date	PCB, TOTAL (µg/L) (39516)	PHORATE TOTAL (µg/L) (39023)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)
MAY						
21...	<.1	<.02	<1	<.1	<.1	<.1
30...	--	--	--	--	--	--
AUG						
28...	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07010075 DEER CREEK AT LADUE, MO--Continued

LOCATION.--Lat 38°36'58", long 90°21'50", St. Louis County, Hydrologic Unit 07140101, on left upstream bank at bridge to Rock Hill Quarry, on McCarthy Construction Company complex, 5 mi east of I-270, 0.93 mi south of Highway 64/40, 0.17 mi west of McKnight.

DRAINAGE AREA.--21.4 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 31, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Water-discharge records fair except for discharges below 1 ft<sup>3</sup>/s and above 800 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	2.9	0.00	43	0.08	1.0	0.47	0.39	0.00	0.00	0.00
2	0.00	2.1	0.41	e0.00	7.8	106	1.4	0.27	0.39	0.00	0.00	0.00
3	0.00	0.34	0.14	e0.00	3.0	12	0.38	0.11	0.30	0.00	0.00	0.00
4	0.00	0.01	0.20	0.00	1.3	2.6	0.60	0.02	0.28	0.00	0.00	0.00
5	53	0.00	0.09	0.00	0.35	2.1	0.22	0.00	33	0.00	0.00	0.00
6	2.3	0.00	0.48	0.00	0.21	2.2	0.08	27	2.0	0.00	7.5	0.00
7	0.15	0.00	0.14	0.00	0.13	0.65	0.67	332	0.27	0.00	0.02	0.00
8	0.02	0.00	0.02	0.00	0.12	0.41	55	269	0.14	0.00	0.00	0.00
9	0.00	0.00	0.00	0.03	0.12	146	6.2	392	1.0	0.00	0.00	0.00
10	207	0.00	0.00	0.00	0.33	5.0	1.3	19	6.4	0.00	0.00	0.00
11	226	0.00	0.00	0.00	0.52	1.9	0.49	7.2	453	0.00	0.29	0.00
12	46	0.00	53	0.00	0.10	1.4	5.7	134	720	0.00	0.84	0.00
13	26	0.00	17	0.00	0.07	0.87	0.97	390	14	0.00	0.48	0.00
14	5.4	0.00	105	0.15	0.06	0.53	0.47	20	5.1	0.00	0.24	0.00
15	48	0.00	5.8	0.00	0.07	76	0.14	6.5	1.3	0.00	0.0	0.00
16	37	0.00	309	0.00	0.02	16	0.02	28	0.01	1.9	0.00	0.00
17	1.5	0.00	290	0.00	0.03	2.9	0.31	223	0.00	2.5	0.00	17
18	0.39	4.6	15	0.00	0.04	1.2	0.09	33	0.00	3.5	38	1.3
19	0.10	1.0	2.7	0.20	31	43	76	7.5	0.00	0.45	0.49	41
20	0.01	0.07	0.46	0.12	5.9	22	70	3.8	0.00	0.00	0.00	31
21	0.00	0.00	0.18	0.00	0.50	4.2	49	2.6	0.00	0.00	0.00	0.33
22	0.00	0.00	3.7	0.00	0.11	2.4	6.6	1.6	0.00	2.5	0.00	0.00
23	2.9	0.00	0.41	1.1	0.09	1.7	1.4	1.1	0.00	7.2	0.00	0.00
24	113	272	0.05	6.6	0.09	2.7	61	3.7	24	0.06	0.00	0.00
25	7.2	3.7	0.00	0.06	0.36	171	7.2	1.6	4.9	0.00	0.00	0.00
26	0.81	3.0	0.0	0.00	1.5	43	0.71	0.55	0.20	0.04	0.00	0.00
27	0.33	1.2	0.03	0.00	0.21	13	187	9.5	0.00	0.06	0.00	0.00
28	0.06	49	0.00	0.00	0.09	5.3	42	31	0.00	0.00	0.00	0.00
29	0.00	37	0.00	2.6	---	3.2	4.6	5.2	0.00	0.00	0.00	0.00
30	0.00	98	0.00	252	---	2.0	1.3	0.88	0.00	0.00	0.00	0.00
31	0.00	---	0.00	510	---	1.1	---	0.38	---	0.00	0.00	---
MEAN	25.1	15.7	26.0	24.9	3.47	22.3	19.4	62.9	42.2	0.59	1.54	3.02
MAX	226	272	309	510	43	171	187	392	720	7.2	38	41
MIN	0.00	0.00	0.00	0.00	0.02	0.08	0.02	0.00	0.00	0.00	0.00	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	MEAN	25.1	15.7	26.0	24.9	3.47	22.3	19.4	62.9	25.3	2.95	1.14	7.38
MAX	25.1	15.7	26.0	24.9	3.47	22.3	19.4	62.9	42.2	5.31	1.54	11.8	
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2001	
MIN	25.1	15.7	26.0	24.9	3.47	22.3	19.4	62.9	8.41	0.59	0.73	3.02	
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2001	2002	2001	2002	

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## WATER YEARS 2001 - 2002

ANNUAL MEAN	20.8	20.8
HIGHEST ANNUAL MEAN	20.8	2002
LOWEST ANNUAL MEAN	20.8	2002
HIGHEST DAILY MEAN	720	Jun 12 2002
LOWEST DAILY MEAN	0.00	Many Days 2001,2002
ANNUAL SEVEN-DAY MINIMUM	0.00	At Times
MAXIMUM PEAK FLOW	6910 <sup>a</sup>	Jun 12 2002
MAXIMUM PEAK STAGE	16.30	Jun 12 2002
INSTANTANEOUS LOW FLOW	0.00	Many Days 2001,2002
10 PERCENT EXCEEDS	42	42
50 PERCENT EXCEEDS	0.15	0.15
90 PERCENT EXCEEDS	0.00	0.00

e Estimated

a From rating extended above 364 ft<sup>3</sup>/s.

## LOWER MISSISSIPPI RIVER BASIN

07010075 DEER CREEK AT LADUE, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2001 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	
DATE	TIME	SAMPLE TYPE											
OCT 05...	0707	ENVIRONMENTAL	18	8.1	83	7.6	414	15.4	140	40.0	8.85	75	
DEC 10...	1240	ENVIRONMENTAL	e.01	7.4	56	7.2	989	3.1	280	83.4	17.4	189	
FEB 05...	1400	ENVIRONMENTAL	.28	8.3	62	7.7	1240	3.0	310	94.0	19.0	227	
MAR 09...	0232	ENVIRONMENTAL	85	7.7	77	7.5	2190	13.2	190	58.0	10.0	119	
MAY 30...	0825	ENVIRONMENTAL	1.0	6.3	70	7.8	742	19.8	250	77.0	14.0	170	
AUG 05...	1440	ENVIRONMENTAL	e.01	5.0	70	7.7	580	32.5	170	49.0	12.0	129	
DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO-GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS-PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS-SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM-ICAL (high level) (mg/L) (00340)
OCT 05...	75	92	0	--	64	E2.6	.38	1.30	.06	.220	.46	4.0	45
DEC 10...	191	233	0	122	E9	E.40	.04	.030	<.01	.110	E.13	22	18
FEB 05...	227	277	0	160	8	1.4	<.01	1.20	<.01	.080	.14	8.4	13
MAR 09...	118	144	0	--	221	2.2	.09	.720	.03	.070	.40	7.3	52
MAY 30...	171	209	0	--	31	.70	.07	.840	.03	.110	.14	4.6	19
AUG 05...	132	161	0	--	12	1.0	.07	<.020	<.01	.080	.15	5.2	20
DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	BERYL-LIUM, DIS-SOLVED (µg/L as Be) (01010)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CHRO-MIUM, DIS-SOLVED (µg/L as Cr) (01030)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)	IRON, DIS-SOLVED (µg/L as Fe) (01046)	LEAD, DIS-SOLVED (µg/L as Pb) (01049)	MANGA-NESE, DIS-SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV-ERABLE (µg/L as Hg) (71900)
OCT 05...	K130000	K91000	K110000	115	2	<1	1.0	1.0	7.3	171	1	114	<.1
DEC 10...	780	1100	K120	21	1	<1	1.0	1.0	2.4	26	<1	194	<.1
FEB 05...	K3	39	71	12	<1	<1	<1.0	<1.0	1.9	31	<1	143	<.1
MAR 09...	6200	9000	11600	317	3	<1	<1.0	4.2	5.9	208	<1	181	<.1
MAY 30...	620	K2200	630	74	2	<1	<1.0	<1.0	3.4	75	<1	192	<.1
AUG 05...	K29	48	K23	6	4	<1	<1.0	<1.0	1.8	11	<1	264	<.1

WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## LOWER MISSISSIPPI RIVER BASIN

07010075 DEER CREEK AT LADUE, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 05...	M	M	<.01	<.009	<.01	<2	M	M	<.006	E.06	<.020	<.01	<.006
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	6	M	<.01	<.009	<.01	<2	3	M	<.006	<.10	<.015	<.02	<.006
MAY 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILTR RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILTR RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILTR WATER TOTAL (µg/L) (34694)
OCT 05...	M	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	E1	M	<3.0
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	M	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	3	<3.0
MAY 30...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 05...	<.06	M	<1	<2	<2	<2	<2	<2	<3	M
DEC 10...	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	4	<1	<2	<2	<2	<2	<2	<1	M
MAY 30...	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--

e--Estimated discharge.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.



07010086 DEER CREEK AT MAPLEWOOD, MO

LOCATION.--Lat 38°36'04", long 90°19'34", St. Louis County, Hydrologic Unit 07140101, on right downstream pier of Big Bend Road bridge, 0.44 mi north of Interstate 44, 4.35 mi east of U.S. 67 (Lindbergh Blvd.), and 0.63 mi upstream of River Des Peres Drainage Channel.

DRAINAGE AREA.--36.5 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year. Annual peaks only for 1969-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 415.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for estimated daily discharges and those below 2 ft<sup>3</sup>/s and above 2,100 ft<sup>3</sup>/s, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e0.49	3.3	8.4	e1.2	74	2.1	3.0	4.3	2.6	1.4	1.1	1.2
2	e0.44	8.2	3.7	e1.1	14	176	3.9	3.5	2.3	1.1	1.0	1.2
3	e0.40	1.5	2.6	e1.3	7.6	22	3.1	2.8	2.3	1.1	1.2	1.3
4	0.50	0.70	2.2	e1.2	5.3	4.1	2.2	2.3	2.4	0.92	1.6	1.4
5	98	0.61	2.3	e1.7	4.0	3.5	2.2	1.9	47	0.97	0.85	1.3
6	6.2	0.75	3.5	e2.4	3.4	2.9	1.7	74	6.7	1.0	48	1.2
7	1.1	1.0	2.0	e1.6	3.0	2.4	4.6	410	2.7	1.3	3.0	1.2
8	0.62	1.7	1.6	e1.3	2.7	2.0	115	369	2.3	0.88	1.4	1.7
9	0.60	1.9	1.4	e1.7	2.4	229	11	477	9.1	1.3	1.2	2.0
10	315	2.0	3.3	e4.8	4.5	10	4.1	25	40	0.98	1.1	1.2
11	313	e1.5	1.2	e3.5	3.2	4.9	4.5	8.2	555	1.7	21	1.2
12	94	e1.0	84	e2.1	2.6	4.4	e6.0	136	860	1.5	14	1.4
13	46	0.77	34	e1.6	2.2	3.5	5.5	505	24	1.3	5.0	1.4
14	22	0.91	173	e1.3	2.3	2.9	4.2	29	6.6	0.87	4.2	1.5
15	73	1.0	15	1.2	2.7	118	2.3	9.2	4.0	0.95	2.0	3.0
16	68	1.1	428	1.5	2.3	29	1.9	e80	3.1	19	1.6	2.5
17	4.9	1.0	421	1.1	1.8	5.8	1.9	e308	2.6	7.3	1.5	43
18	2.5	3.2	28	0.99	1.8	4.1	2.0	53	2.5	26	96	8.3
19	1.7	5.4	9.7	5.1	83	70	117	11	2.3	5.8	6.9	56
20	1.2	1.7	5.4	3.6	16	37	147	5.9	2.1	2.8	2.3	79
21	1.1	1.3	3.8	2.5	4.7	7.5	91	4.2	2.0	1.9	2.1	4.5
22	1.4	1.2	8.4	1.8	2.7	4.5	14	3.6	1.3	6.3	1.5	1.4
23	12	1.3	5.4	6.1	2.3	3.9	5.0	2.9	0.96	19	3.1	1.1
24	153	419	2.6	18	2.2	7.5	112	6.8	24	3.1	1.9	1.5
25	13	8.6	2.3	2.8	3.7	247	17	4.3	14	1.7	1.3	1.0
26	2.9	4.7	2.3	2.2	5.8	65	4.3	2.1	2.6	3.2	1.2	0.94
27	2.1	5.3	2.6	1.3	3.8	27	328	80	2.0	2.1	1.2	1.0
28	1.6	75	2.0	1.1	2.5	9.5	83	128	1.5	1.7	1.2	1.0
29	1.3	58	1.7	7.2	---	6.2	12	13	1.2	1.6	1.3	0.85
30	1.3	162	e1.4	338	---	5.0	6.0	3.2	1.2	4.3	1.3	0.92
31	1.3	---	e1.3	694	---	3.7	---	3.2	---	1.5	1.3	---
MEAN	40.0	25.8	40.8	36.0	9.52	36.1	37.2	89.2	54.4	4.02	7.50	7.51
MAX	315	419	428	694	83	247	328	505	860	26	96	79
MIN	0.40	0.61	1.2	0.99	1.8	2.0	1.7	1.9	0.96	0.87	0.85	0.85
IN.	1.26	0.79	1.29	1.14	0.27	1.14	1.14	2.82	1.66	0.13	0.24	0.23

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

MEAN	15.6	25.4	12.3	26.8	38.9	35.7	25.0	37.8	54.8	25.2	17.2	11.2
MAX	40.0	82.3	40.8	48.4	77.0	108	46.9	89.2	101	48.5	35.3	28.8
(WY)	2002	1997	2002	1999	1999	1998	1998	2002	1998	1998	1996	1996
MIN	8.23	1.93	2.09	5.75	9.52	7.92	9.27	15.4	18.9	2.23	3.67	2.15
(WY)	1998	2000	1999	2000	2002	2000	2000	1999	2001	1997	2001	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1996 - 2002	
ANNUAL MEAN	22.0		32.5		26.5	
HIGHEST ANNUAL MEAN					36.5	
LOWEST ANNUAL MEAN					15.7	
HIGHEST DAILY MEAN	428	Dec 16	860	Jun 12	1980	Jun 24 2000
LOWEST DAILY MEAN	0.40	Oct 3	0.40	Oct 3	0.24	Oct 20 1996
ANNUAL SEVEN-DAY MINIMUM	0.48	Sep 28	1.0	Sep 24	0.30	Oct 1 1996
MAXIMUM PEAK FLOW	---		4950 <sup>a</sup>	Jun 12	6550 <sup>a</sup>	Jun 24 2000
MAXIMUM PEAK STAGE	---		14.44	Jun 12	16.41	Jun 24 2000
INSTANTANEOUS LOW FLOW	---		0.40	Oct 3,4	0.09	Oct 20 1996
ANNUAL RUNOFF (INCHES)	8.20		12.10		9.88	
10 PERCENT EXCEEDS	62		80		48	
50 PERCENT EXCEEDS	2.4		2.7		2.2	
90 PERCENT EXCEEDS	0.80		1.1		0.78	

e Estimated

<sup>a</sup> From rating extended above 1,050 ft<sup>3</sup>/s.

## LOWER MISSISSIPPI RIVER BASIN

07010086 DEER CREEK AT MAPLEWOOD, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 2001 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	
DATE	TIME	SAMPLE TYPE											
OCT 05...	0954	ENVIRONMENTAL	247	7.2	74	7.5	180	15.8	64	20.2	3.42	44	
DEC 10...	1055	ENVIRONMENTAL	1.3	7.6	60	7.5	1140	5.1	310	92.8	18.6	196	
10...	1100	BLANK	--	--	--	--	--	--	--	.11	.01	--	
FEB 04...	1235	ENVIRONMENTAL	5.3	12.2	92	7.6	1300	3.4	330	100	20.0	199	
MAR 09...	0327	ENVIRONMENTAL	392	8.5	85	6.3	2510	14.0	150	48.0	7.00	35	
MAY 29...	0810	ENVIRONMENTAL	13	5.2	57	7.7	531	19.2	160	50.0	8.90	111	
AUG 05...	1320	ENVIRONMENTAL	.75	6.5	88	7.7	1010	30.1	250	71.0	18.0	160	
DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO-GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS-PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS-SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM-ICAL (high level) (mg/L) (00340)
OCT 05...	44	53	0	--	133	E1.8	.55	.690	.03	.150	.37	2.6	26
DEC 10...	198	242	0	162	E3	E1.1	.54	.880	.03	.090	E.11	13	27
10...	--	--	--	.05	<1	<.20	.02	<.020	<.01	<.010	E.02	--	9
FEB 04...	201	246	0	210	6	.80	.18	1.90	.02	.080	.11	10	16
MAR 09...	36	43	0	--	337	2.8	.24	.400	.03	.090	.65	34	46
MAY 29...	112	137	0	--	19	1.2	.24	.970	.07	.160	.23	4.6	25
AUG 05...	160	195	0	--	27	1.9	.76	.690	.21	.320	.46	6.6	20
DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	BERYL-LIUM, DIS-SOLVED (µg/L as Be) (01010)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CHRO-MIUM, DIS-SOLVED (µg/L as Cr) (01030)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)	IRON, DIS-SOLVED (µg/L as Fe) (01046)	LEAD, DIS-SOLVED (µg/L as Pb) (01049)	MANGA-NESE, DIS-SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV-ERABLE (µg/L as Hg) (71900)
OCT 05...	K67000	59000	77000	141	2	<1	1.0	1.4	5.7	201	1	69	<.1
DEC 10...	K170	350	K117	13	1	<1	1.0	1.0	2.5	93	<1	193	<.1
10...	--	--	--	6	<1	<1	1.0	<1.0	1.0	<2	<1	1	<.1
FEB 04...	K67	400	K63	7	<1	<1	<1.0	<1.0	2.4	18	<1	242	<.1
MAR 09...	8500	49000	16200	372	3	<1	<1.0	2.6	5.4	265	2	191	<.1
MAY 29...	13000	K22200	K22800	252	2	<1	<1.0	1.2	5.3	236	1	75	<.1
AUG 05...	450	780	560	4	5	<1	<1.0	<1.0	2.0	27	<1	389	<.1

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07010086 DEER CREEK AT MAPLEWOOD, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 05...	<.06	M	<1	<2	<2	<2	<2	<2	<3	M
DEC 10...	--	--	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	5	<1	<2	<2	<2	<2	<2	<1	M
MAY 29...	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## LOWER MISSISSIPPI RIVER BASIN

07010090 MACKENZIE CREEK NEAR SHREWSBURY, MO

LOCATION.--Lat 38°34'37", long 90°19'24", St. Louis County, Hydrologic Unit 07140101, on right downstream bridge abutment at Resurrection Cemetery, 1.24 mi south of Interstate 44, 4.48 mi east of U.S. 67 (Lindbergh Blvd.), and 0.85 mi upstream of River Des Peres Drainage Channel.

DRAINAGE AREA.--3.49 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Record fair except for estimated daily discharges and those above 300 ft<sup>3</sup>/s and below 1 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.09	0.34	e1.3	0.40	4.3	0.76	0.94	1.4	3.7	0.32	0.15	0.18
2	0.08	2.9	e0.90	0.38	1.7	15	1.2	1.2	0.97	0.18	0.16	0.15
3	0.08	0.32	e0.63	0.36	1.2	1.8	0.85	1.1	0.79	0.20	0.14	0.13
4	0.10	0.29	e0.52	0.34	0.88	1.2	0.77	0.98	0.88	0.24	0.16	0.15
5	10	0.27	e0.61	0.34	0.78	0.93	0.69	0.87	1.3	0.20	0.36	0.17
6	0.47	e0.27	e0.87	0.44	0.76	0.88	0.85	12	0.62	0.19	36	0.16
7	0.78	e0.26	e0.59	0.30	0.74	0.80	2.1	34	0.68	0.21	0.97	0.14
8	0.16	e0.26	e0.43	0.29	0.76	0.78	14	34	0.48	0.24	0.64	0.10
9	0.13	e0.34	e0.36	e0.60	0.80	28	1.5	56	2.4	0.20	0.27	0.10
10	18	e0.32	0.26	e0.43	1.0	1.7	0.89	3.7	16	1.4	0.23	0.13
11	33	e0.28	0.60	e0.31	0.76	1.3	0.85	2.2	139	0.45	1.8	0.14
12	4.2	e0.25	11	e0.27	e0.70	1.4	3.9	18	94	0.14	0.92	0.10
13	5.5	e0.22	1.8	e0.24	e0.63	1.1	0.90	34	2.1	0.15	1.4	0.16
14	0.91	e0.23	22	e0.22	e0.76	1.0	1.4	2.9	0.81	0.13	1.1	0.28
15	12	e0.23	3.9	0.20	e0.68	17	0.76	1.8	0.54	0.12	0.35	0.26
16	3.5	e0.20	44	e0.18	e0.63	2.2	0.69	6.8	0.40	0.14	0.25	0.11
17	0.77	e0.19	29	e0.17	e0.60	1.3	0.76	23	0.31	0.13	0.25	9.3
18	0.60	e0.19	3.4	0.16	0.76	1.0	0.59	3.4	0.26	4.8	18	0.27
19	0.60	e0.45	4.0	1.2	11	12	7.3	1.6	0.28	0.22	0.75	4.7
20	0.60	e0.34	1.4	0.34	1.3	2.7	5.6	1.4	0.29	0.16	0.45	6.6
21	0.60	e0.19	1.1	0.42	0.76	1.5	18	1.3	0.26	0.16	0.29	0.30
22	0.53	e0.19	1.4	0.27	0.73	1.1	1.4	1.1	0.24	0.15	0.32	0.17
23	3.6	e0.45	0.95	2.4	0.68	1.0	0.88	1.1	0.20	0.37	0.50	0.14
24	6.8	e23	0.90	1.4	0.68	2.5	25	1.1	0.24	0.14	0.25	0.34
25	0.56	e1.1	0.94	0.29	1.3	15	1.9	0.99	0.58	0.17	0.20	0.15
26	0.39	e0.48	0.86	e0.23	0.94	7.6	1.5	0.94	0.26	0.13	0.21	0.15
27	0.40	e0.86	0.62	e0.20	0.76	2.0	45	32	0.26	0.13	0.19	0.14
28	0.38	e7.5	0.60	0.29	0.78	1.5	7.4	20	0.31	0.16	0.17	0.15
29	0.40	e9.3	0.54	1.4	---	1.4	1.7	2.7	0.22	0.15	0.16	0.13
30	0.36	e17	0.69	28	---	1.0	1.5	1.5	0.20	0.13	0.15	0.13
31	0.34	---	0.48	56	---	0.96	---	1.2	---	0.12	0.16	---
MEAN	3.42	2.27	4.41	3.16	1.34	4.14	5.03	9.82	8.95	0.38	2.16	0.84
MAX	33	23	44	56	11	28	45	56	139	4.8	36	9.3
MIN	0.08	0.19	0.26	0.16	0.60	0.76	0.59	0.87	0.20	0.12	0.14	0.10

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	1.89	1.68	1.80	2.74	3.84	4.10
MAX	3.42	2.27	4.41	4.97	8.01	11.4
(WY)	2002	2002	2002	1999	1999	1998
MIN	1.10	0.32	0.43	1.04	1.33	0.85
(WY)	2001	2000	1999	2000	2002	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

	2001	2002	1997-2002
ANNUAL MEAN	2.72	3.84	3.41
HIGHEST ANNUAL MEAN			5.46
LOWEST ANNUAL MEAN			2.15
HIGHEST DAILY MEAN	73	139	209
LOWEST DAILY MEAN	0.06	0.08	0.06
ANNUAL SEVEN-DAY MINIMUM	0.07	0.12	0.07
MAXIMUM PEAK FLOW	---	2470 <sup>a</sup>	3260 <sup>a</sup>
MAXIMUM PEAK STAGE	---	10.43	10.80
INSTANTANEOUS LOW FLOW	---	0.08	0.03
10 PERCENT EXCEEDS	6.8	9.6	6.2
50 PERCENT EXCEEDS	0.57	0.68	0.65
90 PERCENT EXCEEDS	0.13	0.15	0.18

e Estimated

<sup>a</sup> From rating extended above 156 ft<sup>3</sup>/s.

07010180 GRAVOIS CREEK NEAR MEHLVILLE, MO

LOCATION.--Lat 38°31'36", long 90°17'58", St. Louis County, Hydrologic Unit 07140101, on center downstream pier of Green Park Road bridge, 1.10 mi south of Interstate 55, 0.24 mi west of Highway 267 (Lemay Ferry Road), and 3.48 mi upstream of River Des Peres Drainage Channel.

DRAINAGE AREA.--18.1 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 422.15 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.73	1.3	5.7	e1.4	35	2.7	6.0	7.9	4.9	e1.7	e1.4	0.96
2	0.66	16	3.5	e1.3	13	88	e7.2	7.1	4.4	e1.6	e1.3	e1.5
3	0.62	2.4	2.6	e1.3	9.6	e14	e5.4	5.7	4.1	6.2	e1.3	e5.2
4	0.58	1.0	2.3	e1.5	7.5	5.5	e4.4	5.3	3.7	6.2	e1.9	3.4
5	41	0.85	2.0	e2.1	7.0	5.1	e4.1	4.9	8.4	2.0	e1.4	1.9
6	4.2	0.85	3.8	e3.2	7.0	5.6	e3.9	69	e4.5	1.7	175	1.2
7	1.2	0.79	2.2	e2.2	6.1	4.2	e6.0	214	3.5	1.7	6.1	1.0
8	0.94	0.77	1.9	e1.7	5.8	4.1	82	234	3.5	1.5	3.4	e1.6
9	0.75	0.92	1.8	e2.5	5.5	166	13	325	6.8	1.5	2.6	e1.7
10	72	0.86	1.4	e7.0	5.3	11	6.2	20	63	1.3	2.3	e1.0
11	155	e0.80	e1.7	e4.0	5.2	7.6	5.8	12	357	1.3	84	0.85
12	38	e0.76	e83	e3.6	5.0	7.1	7.9	70	433	2.3	6.4	0.75
13	26	e0.72	e30	e3.2	4.3	6.1	8.5	229	16	2.8	9.4	0.85
14	6.5	e0.70	e125	e2.8	4.0	4.9	e15	18	8.3	1.5	8.0	1.00
15	48	e0.68	e19	e2.5	3.4	118	5.5	12	7.5	1.2	4.2	1.8
16	29	e0.66	e293	e2.2	3.2	22	5.0	40	6.5	e12	2.7	1.2
17	4.0	e0.64	e265	e2.0	3.0	9.5	5.6	147	5.4	e5.9	2.1	e30
18	2.6	e0.64	e151	e1.8	3.0	8.8	4.1	26	4.1	e15	79	e8.0
19	e1.9	1.9	e15	8.3	63	73	22	13	3.5	e3.2	7.0	e31
20	e1.4	1.4	e7.1	5.6	9.0	23	46	9.0	3.0	1.5	12	e57
21	e1.1	0.82	e6.1	3.5	5.1	e9.6	96	e8.2	2.7	1.2	3.3	e5.8
22	1.6	0.70	e9.2	4.3	3.5	e8.2	11	7.0	3.2	e5.0	2.1	2.0
23	5.1	1.8	e6.5	8.3	3.2	7.0	6.5	6.7	2.7	e10	2.3	1.6
24	61	242	e3.2	20	3.0	8.3	96	12	2.3	e3.8	2.4	1.6
25	8.2	5.2	e2.7	3.4	4.3	117	14	8.3	28	e2.1	2.2	1.6
26	2.2	2.5	e2.4	2.9	8.0	39	6.5	5.5	4.5	e3.4	1.8	1.2
27	1.7	3.6	e2.5	2.7	3.8	e12	192	7.5	2.7	e2.5	1.6	1.0
28	1.9	38	e2.2	2.5	2.9	e9.0	102	95	e2.5	e2.2	1.5	1.0
29	1.4	43	e1.9	3.4	---	11	13	14	e2.2	e2.0	1.5	1.0
30	1.6	115	e1.8	159	---	8.5	9.2	6.8	e1.8	e4.4	1.3	0.96
31	1.5	---	e1.6	329	---	e7.0	---	5.4	---	e1.9	1.1	---
MEAN	16.8	16.2	34.1	19.3	8.52	26.5	27.0	53.1	33.5	3.57	14.0	5.66
MAX	155	242	293	329	63	166	192	325	433	15	175	57
MIN	0.58	0.64	1.4	1.3	2.9	2.7	3.9	4.9	1.8	1.2	1.1	0.85
IN.	1.07	1.00	2.17	1.23	0.49	1.69	1.66	3.38	2.06	0.23	0.89	0.35

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	10.8	17.0	11.6	22.8	26.8	25.7	19.0
MAX	16.9	45.0	34.1	51.4	49.5	69.8	32.0
(WY)	2002	1997	2002	1999	1999	1998	2002
MIN	7.44	2.04	4.02	5.66	8.53	7.19	6.43
(WY)	1998	2000	2001	2000	2002	2000	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1996 - 2002
ANNUAL MEAN	15.8	21.6	19.8
HIGHEST ANNUAL MEAN			27.4
LOWEST ANNUAL MEAN			12.2
HIGHEST DAILY MEAN	373	433	1110
LOWEST DAILY MEAN	0.14	0.58	0.14
ANNUAL SEVEN-DAY MINIMUM	0.18	0.69	0.18
MAXIMUM PEAK FLOW	---	2680 <sup>a</sup>	4020 <sup>a</sup>
MAXIMUM PEAK STAGE	---	14.00	15.67
INSTANTANEOUS LOW FLOW	---	0.55	0.14
ANNUAL RUNOFF (INCHES)	11.83	16.23	14.87
10 PERCENT EXCEEDS	34	62	39
50 PERCENT EXCEEDS	2.7	4.2	4.1
90 PERCENT EXCEEDS	0.59	1.2	1.2

e Estimated

<sup>a</sup> From rating extended above 1,150 ft<sup>3</sup>/s.

## LOWER MISSISSIPPI RIVER BASIN

07010180 GRAVOIS CREEK NEAR MEHLVILLE, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	
DATE	TIME	SAMPLE TYPE											
OCT 15...	2025	ENVIRONMENTAL	115	10.1	95	7.5	320	11.7	91	29.0	4.50	68	
DEC 10...	1515	ENVIRONMENTAL	1.5	12.6	104	7.6	1110	6.3	350	109	19.9	229	
FEB 04...	1415	ENVIRONMENTAL	7.4	11.8	92	7.5	1300	4.8	350	107	20.0	220	
MAR 09...	0316	ENVIRONMENTAL	297	9.1	90	7.7	1890	13.6	190	56.0	11.0	97	
MAY 28...	1420	ENVIRONMENTAL	7.4	4.8	56	7.7	515	21.5	180	55.0	9.20	117	
AUG 05...	1140	ENVIRONMENTAL	1.1	3.3	43	7.3	906	27.9	250	75.0	15.0	195	
DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 15...	68	83	0	--	118	<.20	.02	.520	.01	.160	.29	4.5	21
DEC 10...	230	281	0	141	<1	E.20	<.01	.730	<.01	.070	E.07	11	15
FEB 04...	222	270	0	200	9	.50	<.01	1.80	<.01	.080	.11	12	13
MAR 09...	94	115	0	--	982	2.4	.07	.390	.02	.110	.68	4.2	<5
MAY 28...	118	144	0	--	28	.70	.15	1.10	.05	.100	.16	5.1	19
AUG 05...	195	238	0	--	12	.60	.10	.330	.01	.050	.08	18	13
DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 15...	11000	38000	34000	252	1	<1	<1.0	1.2	2.9	285	2	72	<.1
DEC 10...	K92	210	K20	14	1	<1	1.0	1.0	1.7	41	<1	84	<.1
FEB 04...	K5	K30	K17	12	1	<1	<1.0	<1.0	1.6	23	<1	108	<.1
MAR 09...	K1800	7800	5800	671	3	<1	<1.0	3.6	2.8	463	1	148	<.1
MAY 28...	11000	11600	13400	181	1	<1	<1.0	1.1	2.8	153	<1	104	<.1
AUG 05...	K67	240	K128	<3	2	<1	<1.0	<1.0	1.4	3	<1	286	<.1



WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## LOWER MISSISSIPPI RIVER BASIN

07010180 GRAVOIS CREEK NEAR MEHLVILLE, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 15...	E2	M	<.01	<.009	<.01	<2	E1	M	<.006	<.10	<.020	<.01	<.006
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	6	M	<.01	<.009	<.01	<2	3	M	<.006	<.10	<.015	<.02	<.006
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILTR RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILTR RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILTR WATER TOTAL (µg/L) (34694)
OCT 15...	M	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	E1	<3.0
DEC 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	4	<3.0
MAY 28...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	ETHANE HEXA- CHLORO- WATER UNFLTRD TOTAL (µg/L) (39702)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (34696)	NAPHTH- ALENE TOTAL (µg/L)
OCT 15...	<.06	E1	<1	<2	<2	<2	<2	<2	<3	M	
DEC 10...	--	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	4	<1	<2	<2	<2	<2	<2	<1	M	
MAY 28...	--	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

07010208 MARTIGNEY CREEK NEAR ARNOLD, MO

LOCATION.--Lat 38°29'26", long 90°17'36", St. Louis County, Hydrologic Unit 07140101, on left downstream abutment of Sunrise Height Drive bridge, 0.1 mi south of Interstate 255, 0.5 mi east of Highway 231 (Telegraph Road), and 1.04 mi upstream of Mississippi River.

DRAINAGE AREA.--2.64 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage unknown.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.32	e0.47	0.83	e0.49	e7.6	e0.73	0.81	0.77	0.62	0.31	0.25	0.55
2	0.32	e1.9	0.56	0.48	e2.4	e17	0.89	0.69	0.72	0.31	0.97	0.51
3	0.33	0.52	0.51	0.47	e1.8	e2.9	0.78	0.64	0.84	0.31	0.24	0.52
4	0.36	0.53	0.49	0.47	e1.2	1.4	0.81	0.62	1.6	0.32	0.26	0.52
5	6.8	0.51	0.50	0.48	e0.91	1.3	0.83	0.61	2.0	0.31	5.5	0.45
6	0.48	0.53	0.59	0.54	e0.86	1.2	0.76	11	0.95	0.30	12	0.45
7	0.38	0.56	0.54	0.53	e0.78	1.1	1.4	31	1.00	0.29	0.30	2.4
8	0.39	0.56	0.56	0.55	e0.67	1.0	15	38	0.75	0.30	0.24	0.44
9	0.43	0.54	0.56	e0.51	e0.65	34	2.0	37	0.59	0.33	0.24	0.50
10	2.3	0.52	0.64	e0.53	e0.86	2.3	0.72	2.1	8.1	0.41	0.24	0.51
11	22	0.51	0.69	e0.50	e0.69	1.5	0.65	1.2	15	0.42	22	0.50
12	2.5	0.50	16	e0.47	e0.62	1.3	0.64	18	33	0.22	1.4	0.43
13	3.7	0.50	3.2	e0.47	e0.60	1.1	0.63	28	0.68	0.22	1.9	0.40
14	0.60	0.49	27	0.46	e0.56	1.1	1.3	e1.8	0.54	0.23	1.2	2.8
15	12	0.49	4.2	e0.44	e0.59	17	0.61	e2.2	0.50	0.24	0.78	0.39
16	2.2	0.48	56	e0.43	e0.54	3.8	0.59	e6.9	0.47	0.26	0.65	0.35
17	0.46	0.49	36	e0.42	e0.53	1.7	0.66	e27	0.45	0.24	0.56	7.8
18	0.43	0.50	4.1	e0.57	e0.57	1.2	0.55	e5.2	0.44	8.5	7.9	0.57
19	e0.46	0.53	2.6	e1.1	e10	14	5.9	1.8	0.44	0.22	5.4	12
20	e0.41	0.52	2.1	e0.74	e2.2	3.4	3.0	1.2	0.43	0.21	1.2	7.4
21	e0.39	0.50	1.9	e0.85	e1.0	2.2	6.2	0.91	0.42	0.21	0.50	0.48
22	e0.42	0.51	2.1	e0.73	e0.77	2.5	0.79	0.80	0.42	8.9	0.48	0.42
23	e1.3	0.67	1.5	e1.6	e0.74	2.3	0.59	0.75	0.42	0.79	0.59	0.59
24	e8.2	35	1.2	e2.1	e0.66	3.9	5.6	0.71	0.42	0.23	0.48	0.36
25	e0.87	0.58	0.92	e0.91	e1.2	26	0.85	0.72	4.6	0.23	0.51	0.37
26	e0.48	0.49	0.76	e0.80	e1.0	5.5	0.58	0.74	0.89	0.23	0.54	0.39
27	e0.43	0.46	0.66	e0.69	e0.86	2.3	40	4.2	0.37	0.21	0.57	0.43
28	e0.39	6.5	0.62	e0.66	e0.79	1.6	11	4.6	0.34	0.22	0.56	0.39
29	e0.40	21	0.58	e1.1	---	2.6	1.3	0.85	0.32	0.22	0.53	0.41
30	e0.40	20	0.54	e37	---	1.2	0.93	0.61	0.32	0.22	0.55	0.43
31	e0.43	---	0.51	e81	---	0.94	---	0.57	---	0.23	0.53	---
MEAN	2.28	3.24	5.45	4.46	1.49	5.16	3.55	7.46	2.59	0.83	2.23	1.46
MAX	22	35	56	81	10	34	40	38	33	8.9	22	12
MIN	0.32	0.46	0.49	0.42	0.53	0.73	0.55	0.57	0.32	0.21	0.24	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	1.61	2.15	1.97	2.79	3.38	4.02
MAX	2.28	3.25	5.45	4.53	5.65	8.47
(WY)	2002	2002	2002	1999	1999	1998
MIN	1.21	0.74	0.38	1.25	1.49	1.69
(WY)	1998	2000	1999	2001	2002	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

	2001	2002	1997-2002
ANNUAL MEAN	3.02	3.37	3.04
HIGHEST ANNUAL MEAN			3.97
LOWEST ANNUAL MEAN			2.19
HIGHEST DAILY MEAN	58	81	126
LOWEST DAILY MEAN	0.32	0.21	0.17
ANNUAL SEVEN-DAY MINIMUM	0.33	0.22	0.20
MAXIMUM PEAK FLOW	---	Unknown	1180 <sup>a</sup>
MAXIMUM PEAK STAGE	---	9.48	12.79
INSTANTANEOUS LOW FLOW	---	0.18	0.13
10 PERCENT EXCEEDS	6.2	8.0	6.0
50 PERCENT EXCEEDS	0.66	0.64	0.70
90 PERCENT EXCEEDS	0.43	0.33	0.35

e Estimated

<sup>a</sup> From rating extended above 419 ft<sup>3</sup>/s.

## MERAMEC RIVER BASIN

07010500 MARAMEC SPRING NEAR ST. JAMES, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°57'20", long 91°31'57", in SE ¼ SW ¼ NE ¼ sec.1, T.37 N., R.6 W., Phelps County, Hydrologic Unit 07140102, in Maramec Spring Park, approximately 5 mi east of St. James on Highway 8.

PERIOD OF RECORD.--November 1993 to August 1997, November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	OXYGEN,	OXYGEN,	pH	SPE-CIFIC	TEMPER-	HARD-NESS	CALCIUM	MAGNE-SIUM,	POTAS-SIUM,	
			(cubic feet per second) (00061)	DIS-SOLVED (mg/L) (00300)	(per-cent saturation) (00301)	WATER WHOLE FIELD (stand-ard units) (00400)	CON-DUCT-ANCE (µS/cm) (00095)	ATURE WATER (deg C) (00010)	TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	DIS-SOLVED (mg/L as Ca) (00915)	DIS-SOLVED (mg/L as Mg) (00925)	DIS-SOLVED (mg/L as K) (00935)	
NOV 02...	0945	ENVIRONMENTAL	72	7.5	75	7.5	361	14.0	190	38.6	22.2	.77	
JAN 28...	1330	ENVIRONMENTAL	77	13.2	133	7.4	308	13.9	--	--	--	--	
MAR 21...	0925	ENVIRONMENTAL	365	8.0	78	7.0	233	12.9	--	--	--	--	
MAY 21...	1600	ENVIRONMENTAL	411	8.2	79	7.0	125	13.3	60	12.9	6.86	1.04	
JUL 29...	1015	ENVIRONMENTAL	135	8.8	88	7.8	305	14.0	--	--	--	--	
SEP 05...	1245	ENVIRONMENTAL	103	8.6	87	7.2	291	14.5	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 02...	5.15	170	172	210	0	7.95	E.1	5.2	<10	194	<.04	E.08	.68
JAN 28...	--	161	163	199	0	--	--	--	<10	--	.04	E.06	.81
MAR 21...	--	129	130	159	0	--	--	--	<10	--	<.04	<.10	.60
MAY 21...	2.03	51	52	63	0	2.59	E.1	5.5	<10	88	<.04	.14	.46
JUL 29...	--	146	147	179	0	--	--	--	<10	--	<.04	E.07	.80
SEP 05...	--	136	139	169	0	--	--	--	<10	--	<.04	E.07	.83
DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 02...	<.008	E.04	.02	E.04	K3	K8	K1	9	16	E.1	E.02	<.1	<6
JAN 28...	<.008	<.06	.04	<.06	K1	K4	K3	--	--	--	--	--	--
MAR 21...	E.006	E.03	<.02	<.06	K76	20	27	--	--	--	--	--	--
MAY 21...	E.004	<.06	E.01	<.06	K17	K75	K370	188	328	E.1	<.04	<.1	E4
JUL 29...	<.008	<.06	E.01	<.06	K8	K13	31	--	--	--	--	--	--
SEP 05...	<.008	<.06	.02	E.03	21	K16	51	--	--	--	--	--	--

07010500 MARAMEC SPRING NEAR ST. JAMES, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 02...	<10	<.08	<1	<2.0	<.01	<.3	--	1
JAN 28...	--	--	--	--	--	--	--	--
MAR 21...	--	--	--	--	--	--	--	--
MAY 21...	65	.27	<1	4.3	E.01	<.3	--	3
JUL 29...	--	--	--	--	--	--	--	--
SEP 05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

07013000 MERAMEC RIVER NEAR STEELVILLE, MO

LOCATION.--Lat 37°59'58", long 91°21'39", in NE ¼ sec.21, T.38 N., R.4 W., Crawford County, Hydrologic Unit 07140102, on left bank 20 ft downstream from railroad bridge, 400 ft upstream from highway bridge, 0.8 mi upstream from Whittenburg Creek, 1.5 mi north of Steelville, and at mile 146.4.

DRAINAGE AREA.--781 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1922 to current year. Prior to January 1923 monthly discharges only, published in WSP 1311. Gage-height records for 1916-33 at site 1.0 mi upstream in reports of the National Weather Service.

REVISED RECORDS.--WSP 897: 1939. WSP 1007: Drainage Area.

GAGE.--Water-stage recorder. Datum of gage is 681.68 ft above National Geodetic Vertical Datum of 1929. Prior to May 24, 1934, and from July 20, 1966 to July 20, 1967, nonrecording gage, 400 ft downstream, same datum; May 24, 1934 to July 20, 1966, water-stage recorder at present site and datum; July 20, 1967 to Feb. 13, 1973, water-stage recorder at site 1,900 ft downstream and at datum 1.8 ft lower; Feb. 14, 1973 to current year, water-stage recorder at present site and datum.

REMARKS.--Records good. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 20, 1915, reached a stage of 26.5 ft, discharge, 60,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	113	129	811	225	4000	214	640	672	547	244	181	208
2	112	134	554	212	2000	363	565	610	506	237	180	201
3	108	132	424	203	1530	892	522	540	471	256	178	194
4	107	134	351	197	1080	693	469	482	452	308	170	186
5	123	139	304	196	828	601	427	437	439	284	167	182
6	121	133	274	193	687	578	396	416	424	245	166	178
7	132	129	251	186	592	554	379	458	409	229	164	176
8	130	128	233	183	518	499	392	6130	390	217	160	172
9	121	124	216	181	461	514	539	20100	372	210	158	170
10	122	123	204	178	414	1310	701	6590	373	230	160	168
11	124	122	193	174	370	996	633	2390	384	245	165	166
12	158	121	201	172	340	834	569	1940	391	255	159	165
13	154	121	265	168	312	820	528	13400	382	241	180	163
14	143	122	395	166	291	724	523	21200	416	229	230	164
15	133	121	388	160	276	638	596	3290	379	224	287	166
16	140	121	483	155	260	671	623	2070	350	214	252	162
17	134	121	3730	153	248	887	575	12600	332	205	224	167
18	141	121	2730	151	236	744	577	21300	321	223	344	167
19	133	122	1790	156	240	748	555	6850	312	220	1150	188
20	126	120	1120	154	255	3160	6150	2720	302	202	1380	234
21	122	121	824	153	281	2070	4030	1940	295	194	1450	253
22	120	121	663	153	281	1190	2570	1510	286	190	735	222
23	126	122	554	149	266	1030	1670	1260	276	233	478	196
24	157	217	475	151	255	854	1260	1090	268	309	401	185
25	261	429	412	172	245	1610	1030	976	269	253	346	178
26	194	336	366	234	236	2140	869	867	264	220	310	174
27	162	272	332	226	227	1340	780	780	254	205	280	174
28	148	250	306	210	219	1200	978	825	277	193	257	169
29	142	260	282	199	---	988	906	759	288	185	241	166
30	136	599	257	219	---	832	757	657	257	183	228	165
31	133	---	239	1740	---	712	---	596	---	181	217	---
MEAN	138	175	633	231	605	981	1040	4370	356	228	355	182
MAX	261	599	3730	1740	4000	3160	6150	21300	547	309	1450	253
MIN	107	120	193	149	219	214	379	416	254	181	158	162
IN.	0.20	0.25	0.93	0.34	0.81	1.45	1.49	6.45	0.51	0.34	0.52	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1923 - 2002, BY WATER YEAR (WY)

MEAN	282	493	569	565	661	879	1086	1001	720	380	267	278
MAX	2562	2995	4712	3155	2397	2842	4954	4370	4644	3461	1181	2664
(WY)	1950	1994	1983	1950	1985	1945	1994	2002	1935	1998	1982	1993
MIN	85.2	118	116	114	126	141	138	131	134	92.9	104	82.2
(WY)	1957	1965	1965	1956	1934	1954	1954	1977	1932	1934	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1923 - 2002
ANNUAL MEAN	329	780	598
HIGHEST ANNUAL MEAN			1473
LOWEST ANNUAL MEAN			177
HIGHEST DAILY MEAN	7440	Feb 25	21300
LOWEST DAILY MEAN	106	Sep 7	107
ANNUAL SEVEN-DAY MINIMUM	108	Sep 1	117
MAXIMUM PEAK FLOW	---		29400
MAXIMUM PEAK STAGE	---		18.93
INSTANTANEOUS LOW FLOW	---		103
ANNUAL RUNOFF (INCHES)	5.72		13.55
10 PERCENT EXCEEDS	554		1220
50 PERCENT EXCEEDS	201		257
90 PERCENT EXCEEDS	121		133

## MERAMEC RIVER BASIN

313

07014000 HUZZAH CREEK NEAR STEELVILLE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°58'29", long 91°12'16", in SW  $\frac{1}{4}$  SW  $\frac{1}{4}$  SE  $\frac{1}{4}$  sec.25, T.38 N., R.3 W., Crawford County, Hydrologic Unit 07140102, at bridge on State Highway 8 at Huzzah Valley Resort, approximately 9 mi east of Steelville.

DRAINAGE AREA.--259 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)			
DATE	TIME	SAMPLE TYPE													
NOV 01...	1230	ENVIRONMENTAL		57	10.6	108	7.9	404	14.9	210	42.0	26.3	.30		
JAN 23...	1410	ENVIRONMENTAL		70	11.7	109	7.6	378	10.6	--	--	--	--		
MAR 28...	1130	ENVIRONMENTAL		469	11.0	98	8.0	251	9.1	--	--	--	--		
MAY 09...	1450	ENVIRONMENTAL		3050	8.4	89	7.5	161	17.3	86	19.1	9.40	.79		
JUL 30...	0950	ENVIRONMENTAL		73	10.5	125	7.7	373	23.0	200	42.2	23.0	1.31		
SEP 03...	1020	ENVIRONMENTAL		77	8.8	104	7.7	357	22.5	--	--	--	--		
			ANC WATER UNFLTRD FET FIELD (mg/L as Na) (00930)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	
DATE															
NOV 01...	4.41	199	201	245	0	5.02	<.1	14.8	58	206	<.04	E.06		.05	
JAN 23...	--	173	176	215	0	--	--	--	<10	--	<.04	E.06		.29	
MAR 28...	--	105	105	128	0	--	--	--	<10	--	<.04	E.09		.28	
MAY 09...	3.01	78	80	98	0	1.83	<.1	8.5	49	115	<.04	.47		.08	
JUL 30...	4.22	182	183	223	0	4.18	E.1	10.7	<10	208	<.04	<.10		.25	
SEP 03...	--	170	171	208	0	--	--	--	<10	--	<.04	E.07		.23	
			NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
DATE															
NOV 01...	<.008	<.06	<.02	<.06	K6	21	36	7	11	.2	<.04	<.1		<6	
JAN 23...	E.005	<.06	<.02	<.06	<1	K1	<1	--	--	--	--	--		--	
MAR 28...	<.008	<.06	<.02	<.06	K1	K5	K12	--	--	--	--	--		--	
MAY 09...	.010	<.06	<.02	E.06	K120	1300	3300	175	621	.4	.04	E.1		<6	
JUL 30...	<.008	<.06	<.02	<.06	K13	20	K150	1	15	.2	<.04	<.1		<6	
SEP 03...	<.008	<.06	<.02	<.06	76	K94	84	--	--	--	--	--		--	

## MERAMEC RIVER BASIN

07014000 HUZAZH CREEK NEAR STEELVILLE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 01...	<10	E.05	<1	E2.3	<.01	<.3	--	3
JAN 23...	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--
MAY 09...	146	1.25	1	15.9	E.01	<.3	--	8
JUL 30...	<10	<.08	<1	4.6	<.01	<.3	<1	1
SEP 03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.



07014200 COURTOIS CREEK AT BERRYMAN, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°55'05", long 91°06'04", in NE  $\frac{1}{4}$  SW  $\frac{1}{4}$  SW  $\frac{1}{4}$  sec.13, T.37 N., R.2 W., Crawford County, Hydrologic Unit 07140102, at bridge on State Highway 8, approximately 13 mi east of Steelville.

DRAINAGE AREA.--173 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	pH OXYGEN, (percent saturation) (00301)	WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV														
01...	1000	ENVIRONMENTAL	29	9.3	95	7.9	443	14.9	240	47.6	29.6	.65		
01...	1000	BLANK	--	--	--	--	--	--	--	.02	E.008	<.10		
JAN														
23...	1230	ENVIRONMENTAL	47	10.9	98	7.9	393	9.1	--	--	--	--		
23...	1235	BLANK	--	--	--	--	--	--	--	--	--	--		
MAR														
28...	1010	ENVIRONMENTAL	328	11.1	97	7.0	247	8.1	--	--	--	--		
28...	1011	BLANK	--	--	--	--	--	--	--	--	--	--		
MAY														
09...	1110	ENVIRONMENTAL	3250	8.1	81	7.3	145	14.4	78	17.0	8.58	.62		
09...	1230	BLANK	--	--	--	--	--	--	--	--	--	--		
JUL														
30...	1210	ENVIRONMENTAL	31	6.9	86	7.8	399	25.4	--	--	--	--		
30...	1211	BLANK	--	--	--	--	--	--	--	--	--	--		
SEP														
03...	1200	BLANK	--	--	--	--	--	--	--	--	--	--		
03...	1215	ENVIRONMENTAL	32	7.8	96	7.9	391	24.6	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, DIS-SOLVED (mg/L as N) (00631)
NOV														
01...	3.39	200	201	245	0	5.60	<.1	27.5	<10	264	<.04	E.08	.05	
01...	<.09	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05	
JAN														
23...	--	178	181	221	0	--	--	--	<10	--	<.04	E.06	.13	
23...	--	--	--	--	--	--	--	--	--	--	<.04	<.10	<.05	
MAR														
28...	--	80	80	97	0	--	--	--	<10	--	<.04	E.07	.10	
28...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	
MAY														
09...	1.50	74	75	91	0	1.33	E.1	7.2	73	111	<.04	.57	.05	
09...	--	--	--	--	--	--	--	--	<10	<10	<.04	<.10	<.05	
JUL														
30...	--	196	198	241	0	--	--	--	<10	--	<.04	E.06	.10	
30...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	
SEP														
03...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	
03...	--	184	185	225	0	--	--	--	<10	--	<.04	E.05	.09	

## MERAMEC RIVER BASIN

07014200 COURTOIS CREEK AT BERRYMAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
NOV													
01...	<.008	<.06	<.02	<.06	K5	21	23	6	11	.2	<.04	<.1	<6
01...	<.008	<.06	<.02	<.06	--	--	--	7	7	<.2	<.04	<.1	<6
JAN													
23...	<.008	<.06	<.02	<.06	K1	<1	K2	--	--	--	--	--	--
23...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
MAR													
28...	<.008	<.06	<.02	<.06	K1	K6	K6	--	--	--	--	--	--
28...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
MAY													
09...	E.007	<.06	<.02	.07	K150	590	3200	165	789	.4	.05	E.1	E3
09...	<.008	<.06	<.02	<.06	--	--	--	1	7	<.2	<.04	<.1	<6
JUL													
30...	<.008	<.06	<.02	<.06	K2	K18	34	--	--	--	--	--	--
30...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
SEP													
03...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
03...	<.008	<.06	<.02	<.06	K7	21	44	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
01...	<10	<.08	<1	E2.3	<.01	<.3	24	2
01...	<10	<.08	<1	<2.0	<.01	<.3	--	2
JAN								
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
MAR								
28...	--	--	--	--	--	--	--	--
28...	--	--	--	--	--	--	--	--
MAY								
09...	146	3.21	9	13.4	.01	<.3	47	32
09...	<10	<.08	<1	E1.0	<.01	<.3	65	2
JUL								
30...	--	--	--	--	--	--	--	--
30...	--	--	--	--	--	--	--	--
SEP								
03...	--	--	--	--	--	--	--	--
03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07014500 MERAMEC RIVER NEAR SULLIVAN, MO

LOCATION.--Lat 38°09'30", long 91°06'30", in SE ¼ NE ¼ sec.35, T.40 N., R.2 W., Crawford County, Hydrologic Unit 07140102, on right bank at upstream side of Sappington Bridge, 3.8 mi downstream from Brazil Creek, 4.0 mi southeast of Sullivan, and at mile 117.0.

DRAINAGE AREA.--1,475 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--September 1921 to September 1933, October 1943 to current year. Monthly discharge only for October 1943, published in WSP 1311.

REVISED RECORDS.--WSP 1007: 1922(M), 1924-30, 1933: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 581.82 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Oct. 21, 1952, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records fair. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of 33.5 ft, from information by local residents, discharge, 90,000 ft<sup>3</sup>/s.

CORRECTIONS.--The peak stage for period of record is 32.34 ft, Dec. 4, 1982, superseding figures published in WDR MO-88-1 to WDR MO-00-1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	191	276	1430	520	9440	e600	1700	1850	1400	568	407	446
2	189	280	1350	490	7130	e930	1510	1670	1290	558	399	428
3	189	274	1010	470	3600	e1940	1360	1480	1200	560	402	412
4	187	267	801	451	2690	e1590	1220	1310	1130	615	390	399
5	211	271	666	414	2150	1350	1090	1180	1110	651	377	385
6	232	272	579	409	1760	e1300	1000	1200	1070	601	373	373
7	221	264	518	405	1510	1250	932	1570	1020	550	367	363
8	238	258	479	395	1310	1200	980	7100	967	519	354	356
9	237	253	437	388	1150	1740	1370	22600	919	499	347	346
10	234	249	406	381	1030	3440	1820	19400	892	485	341	333
11	239	246	381	373	913	3030	1720	5900	952	536	374	326
12	254	243	384	365	821	2450	1540	4330	1990	576	376	321
13	284	242	449	354	740	2220	1400	15300	1380	601	418	317
14	290	241	581	347	672	2010	1380	26400	1140	557	1040	319
15	282	242	726	337	624	1780	1530	13900	1040	527	842	328
16	290	241	1160	328	578	1850	1590	4260	925	508	704	326
17	285	240	5240	319	539	2330	1480	13400	853	490	594	351
18	277	241	7780	315	506	2110	1420	31500	802	478	604	365
19	278	241	4140	325	502	2100	1370	21100	765	534	2230	385
20	266	239	2820	321	564	e6380	3580	5990	729	486	1860	440
21	256	237	2150	319	650	e5280	6610	4210	698	466	2290	481
22	248	238	1750	314	693	e4190	4900	3330	672	453	1630	514
23	252	239	1470	321	659	e3240	3520	2770	651	478	1130	454
24	290	401	1240	351	616	e3070	2840	2420	628	584	911	414
25	350	518	1070	446	580	e4310	2490	2190	670	592	774	390
26	509	733	936	547	e538	5190	2170	2000	718	527	680	375
27	425	596	832	579	e538	3830	2020	1820	627	483	614	365
28	364	525	752	539	e538	e3030	2600	2140	616	452	560	351
29	326	523	690	508	---	e2620	2520	2180	620	431	521	341
30	304	757	617	537	---	e2210	2120	1750	605	419	490	334
31	289	---	560	2530	---	e1900	---	1550	---	412	467	---
MEAN	274	328	1400	474	1537	2596	2059	7348	936	522	738	378
MAX	509	757	7780	2530	9440	6380	6610	31500	1990	651	2290	514
MIN	187	237	381	314	502	600	932	1180	605	412	341	317
IN.	0.21	0.25	1.09	0.37	1.09	2.03	1.56	5.75	0.71	0.41	0.58	0.29

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	587	1041	1225	1218	1457	1936	2388	2037	1323	758	543	538
MAX	4307	5692	8307	6304	5264	5786	9435	7348	8742	6142	2030	5489	
(WY)	1950	1986	1983	1950	1982	1945	1994	2002	1945	1951	1982	1993	
MIN	156	249	232	216	281	295	347	292	263	205	199	146	
(WY)	1957	1957	1956	1956	1954	1954	1954	1932	1932	1954	1964	1956	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	692		1556		1252	
HIGHEST ANNUAL MEAN					3014	
LOWEST ANNUAL MEAN					341	
HIGHEST DAILY MEAN	8340	Feb 25	31500	May 18	70600	Jun 9 1945
LOWEST DAILY MEAN	174	Sep 6,7	187	Oct 4	131	Sep 20 1956
ANNUAL SEVEN-DAY MINIMUM	180	Sep 2	203	Oct 1	133	Sep 16 1956
MAXIMUM PEAK FLOW	---		33800	May 18	77300	Jun 9 1945
MAXIMUM PEAK STAGE	---		21.78	May 18	32.34	Dec 4 1982
INSTANTANEOUS LOW FLOW	---		184	Oct 4	131	Sep 20 1956
ANNUAL RUNOFF (INCHES)	6.37		14.33		11.53	
10 PERCENT EXCEEDS	1320		2920		2410	
50 PERCENT EXCEEDS	406		596		603	
90 PERCENT EXCEEDS	232		273		271	

e Estimated

## MERAMEC RIVER BASIN

07014500 MERAMEC RIVER NEAR SULLIVAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1963 to July 1975, July 1977 to June 1990, November 1992 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)		
OCT 23...	0945	ENVIRONMENTAL	240	7.4	79	7.9	378	16.9	--	--	--	--		
NOV 01...	1010	ENVIRONMENTAL	275	9.1	89	8.3	397	13.5	210	40.5	25.5	1.23		
DEC 05...	0920	ENVIRONMENTAL	673	9.2	88	8.0	357	12.3	--	--	--	--		
05...	0921	REPLICATE	--	--	--	--	--	--	--	--	--	--		
JAN 23...	0915	ENVIRONMENTAL	312	12.0	99	7.9	349	6.0	180	36.2	22.1	.44		
FEB 12...	1145	ENVIRONMENTAL	821	11.3	94	8.1	277	6.9	--	--	--	--		
MAR 28...	0945	ENVIRONMENTAL	3000	11.1	98	8.1	213	9.1	--	--	--	--		
APR 10...	0950	ENVIRONMENTAL	1860	10.2	100	8.2	281	13.3	--	--	--	--		
10...	0951	REPLICATE	--	10.3	100	8.2	281	13.2	--	--	--	--		
MAY 23...	1000	ENVIRONMENTAL	23700	9.0	94	7.6	214	16.2	110	23.0	12.3	.65		
JUN 20...	1000	ENVIRONMENTAL	1130	10.0	123	8.0	306	25.3	--	--	--	--		
JUL 30...	1420	ENVIRONMENTAL	1010	7.7	102	7.9	338	28.6	170	36.0	20.5	1.39		
AUG 12...	1400	ENVIRONMENTAL	941	8.7	111	8.0	340	26.4	--	--	--	--		
SEP 03...	1145	ENVIRONMENTAL	1010	8.3	105	8.8	329	26.1	--	--	--	--		
DATE		SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 23...	--	176	177	216	0	--	--	--	<10	--	<.04	E.09	<.05	
NOV 01...	6.28	185	185	225	0	8.05	.1	11.4	<10	206	<.04	E.09	<.05	
DEC 05...	--	174	175	214	0	--	--	--	<10	--	<.04	.14	.20	
05...	--	--	--	--	--	--	--	--	<10	--	<.04	.12	.20	
JAN 23...	3.39	177	178	217	0	11.6	<.1	10.3	<10	174	<.04	E.09	.21	
FEB 12...	--	128	128	156	0	--	--	--	<10	--	<.04	E.10	E.56	
MAR 28...	--	107	107	131	0	--	--	--	16	--	<.04	.24	.29	
APR 10...	--	135	135	164	0	--	--	--	20	--	<.04	.18	.11	
10...	--	134	133	162	0	--	--	--	19	--	<.04	.18	.11	
MAY 23...	2.67	97	98	120	0	2.79	E.1	7.7	26	125	<.04	.17	.36	
JUN 20...	--	172	172	210	0	--	--	--	<10	--	<.04	.13	.14	
JUL 30...	3.18	164	164	200	0	4.58	<.1	7.7	<10	183	<.04	E.08	.16	
AUG 12...	--	163	166	203	0	--	--	--	<10	--	<.04	.28	.11	
SEP 03...	--	173	172	203	4	--	--	--	<10	--	<.04	.13	.17	

07014500 MERAMEC RIVER NEAR SULLIVAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 23...	<.008	<.06	<.02	<.06	K3	K11	25	--	--	--	--	--	--
NOV 01...	<.008	<.06	<.02	<.06	K2	K7	K12	14	29	.2	<.04	<.1	<6
DEC 05...	<.008	<.06	<.02	<.06	K7	K20	39	--	--	--	--	--	--
05...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
JAN 23...	<.008	<.06	<.02	<.06	K3	K6	K4	17	23	E.2	<.04	<.1	<6
FEB 12...	<.008	<.06	<.02	<.06	<1	K45	K5	--	--	--	--	--	--
MAR 28...	E.005	<.06	E.01	E.04	22	87	47	--	--	--	--	--	--
APR 10...	<.008	<.06	<.02	<.06	22	25	K13	--	--	--	--	--	--
10...	<.008	<.06	<.02	<.06	22	39	K18	--	--	--	--	--	--
MAY 23...	E.005	<.06	<.02	E.03	K15	K37	80	84	265	<.2	<.04	<.1	<6
JUN 20...	E.005	<.06	<.02	<.06	22	22	85	--	--	--	--	--	--
JUL 30...	<.008	<.06	<.02	<.06	K1	K13	K8	2	78	.3	<.04	<.1	<6
AUG 12...	E.005	<.06	<.02	E.03	K70	130	46	--	--	--	--	--	--
SEP 03...	<.008	<.06	E.01	<.06	K11	K14	K14	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 23...	--	--	--	--	--	--	--	--
NOV 01...	17	E.05	<1	7.4	<.01	<.3	--	2
DEC 05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--
JAN 23...	21	.11	<1	10.0	<.01	E.2	9	3
FEB 12...	--	--	--	--	--	--	--	--
MAR 28...	--	--	--	--	--	--	--	--
APR 10...	--	--	--	--	--	--	--	--
10...	--	--	--	--	--	--	--	--
MAY 23...	129	.27	1	12.2	<.01	E.3	--	3
JUN 20...	--	--	--	--	--	--	--	--
JUL 30...	<10	E.04	M	7.5	<.01	<.3	<1	2
AUG 12...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

07015720 BOURBEUSE RIVER NEAR HIGH GATE, MO

LOCATION.--Lat 38°08'49", long 91°34'50", in SW ¼ NE ¼ sec.4, T.39 N., R.6 W., Phelps County, Hydrologic Unit 07140103, on downstream side of right bridge pier on State Highway B, 1.8 mi downstream from Lanes Fork, 5.0 mi east of High Gate, and 11.0 mi north of St. James.

DRAINAGE AREA.--135 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1965 to current year. Occasional low-flow measurements 1963, 1964.

REVISED RECORDS.--WDR MO-83-1: 1981.

GAGE.--Water-stage recorder. Datum of gage is 802.1 ft above National Geodetic Vertical Datum of 1929 (levels by Missouri State Highway and Transportation Commission). Datum of gage prior to Oct. 1, 1987 was 2 ft higher. Prior to Aug. 17, 1966, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges and those below 5 ft<sup>3</sup>/s, which are poor. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1957 reached a stage of about 23 ft, from information by local resident.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.22	4.2	172	e16	1500	15	62	66	28	e3.2	1.5	5.6
2	0.22	5.5	62	e16	402	2330	58	52	26	e3.1	1.3	4.0
3	0.21	5.5	35	e16	202	1380	55	41	23	53	1.0	2.9
4	0.19	5.2	26	e15	110	312	47	35	31	81	0.86	2.4
5	0.57	4.7	21	e14	74	286	42	30	222	24	0.76	1.9
6	0.52	4.0	18	13	59	367	39	50	94	11	0.69	1.6
7	0.39	3.9	15	12	50	189	37	1540	51	6.3	0.61	1.4
8	0.35	3.7	13	12	42	136	80	4260	36	4.4	0.54	1.2
9	1.6	3.5	12	12	37	376	129	4040	29	3.4	0.48	1.0
10	7.4	3.4	10	e11	34	232	86	598	27	3.0	0.44	0.87
11	14	3.1	9.8	e11	31	152	65	223	27	4.4	0.39	0.80
12	13	3.0	18	e11	29	163	54	1230	55	148	0.37	0.70
13	11	2.8	271	e10	27	133	48	4300	47	45	0.40	0.62
14	7.1	2.8	150	e10	26	110	44	617	36	15	5.0	0.58
15	6.8	2.8	101	e9.8	24	471	40	217	27	7.7	5.8	0.54
16	7.9	2.7	1860	e9.5	22	768	37	442	22	5.2	3.5	0.51
17	8.4	2.7	2860	e9.5	20	299	39	6160	18	3.9	3.0	0.50
18	8.2	2.6	648	e9.4	19	199	38	1400	15	88	1810	0.49
19	5.7	2.6	235	e9.2	21	1480	958	385	13	79	250	0.65
20	4.5	2.6	109	e9.0	32	1290	3730	176	11	17	137	1.1
21	4.1	2.5	65	e8.9	30	373	1760	113	7.3	8.1	80	2.3
22	4.1	2.4	49	e8.8	25	183	442	83	6.1	4.8	45	3.5
23	17	2.4	39	e9.0	23	132	196	66	e5.7	5.1	34	2.6
24	118	156	30	17	21	106	122	66	e5.2	5.3	29	2.1
25	46	51	26	18	19	1000	86	65	e4.8	4.1	24	1.8
26	18	21	23	16	19	487	59	54	e4.5	3.6	27	1.4
27	11	14	20	14	17	299	637	46	e4.3	2.9	30	1.0
28	7.5	15	19	14	16	175	459	42	e4.3	2.2	15	0.90
29	6.2	286	e18	14	---	126	156	40	e3.6	1.9	12	0.80
30	5.5	1010	e17	1120	---	95	91	36	e3.4	1.8	9.8	0.72
31	4.7	---	e17	4880	---	75	---	32	---	1.7	8.0	---
MEAN	11.0	54.4	225	205	105	443	323	855	29.6	20.9	81.8	1.55
MAX	118	1010	2860	4880	1500	2330	3730	6160	222	148	1810	5.6
MIN	0.19	2.4	9.8	8.8	16	15	37	30	3.4	1.7	0.37	0.49
IN.	0.09	0.45	1.92	1.75	0.81	3.79	2.67	7.30	0.24	0.18	0.70	0.01

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

	MEAN	44.6	155	181	150	178	234	269	192	128	48.1	35.5	45.1
MAX	552	799	1213	549	634	747	1191	894	963	546	373	865	
(WY)	1987	1986	1983	1969	1985	1984	1994	1995	1985	1998	1982	1993	
MIN	0.34	0.94	1.68	0.65	12.4	1.32	1.57	3.88	0.95	0.25	0.19	0.14	
(WY)	1967	1981	1990	1977	1981	1981	1981	1977	1972	1972	1971	1971	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1965 - 2002

	ANNUAL MEAN	106	198	137
HIGHEST ANNUAL MEAN				315
LOWEST ANNUAL MEAN				15.6
HIGHEST DAILY MEAN	4620	Apr 3	6160	May 17
LOWEST DAILY MEAN	0.19	Oct 4	0.19	Oct 4
ANNUAL SEVEN-DAY MINIMUM	0.22	Sep 28	0.33	Oct 1
MAXIMUM PEAK FLOW	---		10600	May 17
MAXIMUM PEAK STAGE	---		17.25	May 17
INSTANTANEOUS LOW FLOW	---		0.19	Oct 3-5
ANNUAL RUNOFF (INCHES)	10.66		19.92	
10 PERCENT EXCEEDS	131		369	
50 PERCENT EXCEEDS	10		18	
90 PERCENT EXCEEDS	0.38		1.3	

e Estimated

07016400 BOURBEUSE RIVER ABOVE UNION, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 38°25'55", long 91°01'11", in NE ¼ NE ¼ SW ¼ sec.34, T.43 N., R.1 W., Franklin County, Hydrologic Unit 07140103, at bridge on North Bend Drive, 0.5 mi southwest of Union, and 5.5 mi upstream from the Bourbeuse River near Union gaging station.

DRAINAGE AREA.--808 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--November 1983 to October 1987, November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	OXYGEN, DIS-SOLVED	OXYGEN, DIS-SOLVED	pH	SPE-CIFIC CON-DUCT-ANCE	TEMPER-ATURE WATER	HARD-NESS TOTAL	CALCIUM DIS-SOLVED	MAGNE-SIUM, DIS-SOLVED	POTAS-SIUM, DIS-SOLVED	
			(cubic feet per second) (00061)	(mg/L) (00300)	(per-cent satur-ation) (00301)	WATER WHOLE FIELD (stand-ard units) (00400)	(µS/cm) (00095)	(deg C) (00010)	(mg/L as CaCO <sub>3</sub> ) (00900)	(mg/L as Ca) (00915)	(mg/L as Mg) (00925)	(mg/L as K) (00935)	
NOV 15...	1200	ENVIRONMENTAL	46	9.1	85	7.8	352	12.0	170	32.0	21.8	2.36	
JAN 16...	0900	ENVIRONMENTAL	109	12.7	96	7.9	298	3.0	--	--	--	--	
MAR 13...	1130	ENVIRONMENTAL	709	10.9	96	7.6	203	8.5	--	--	--	--	
MAY 16...	0920	ENVIRONMENTAL	1920	7.9	84	7.4	145	17.2	63	13.2	7.37	2.10	
16...	0921	REPLICATE	--	--	--	--	--	--	63	13.2	7.36	2.32	
JUL 10...	1040	ENVIRONMENTAL	103	2.4	32	7.8	269	29.4	--	--	--	--	
SEP 05...	0900	ENVIRONMENTAL	47	5.7	71	7.8	204	26.1	--	--	--	--	
05...	0901	REPLICATE	--	--	--	--	--	--	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 15...	8.08	139	142	173	0	10.4	.2	26.7	12	192	<.04	.23	<.05
JAN 16...	--	104	106	129	0	--	--	--	<10	--	<.04	.16	.72
MAR 13...	--	58	58	71	0	--	--	--	18	--	<.04	.39	.26
MAY 16...	3.01	59	58	71	0	3.13	E.1	9.1	53	122	E.03	.63	.27
16...	2.94	--	--	--	--	2.92	E.1	8.8	60	98	<.04	.68	.28
JUL 10...	--	115	116	142	0	--	--	--	26	--	<.04	.35	<.05
SEP 05...	--	83	83	102	0	--	--	--	<10	--	<.04	.30	.11
05...	--	--	--	--	--	--	--	--	<10	--	<.04	.31	.11
DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 15...	<.008	<.06	<.02	E.03	K3	K4	K3	26	69	.5	<.04	<.1	<6
JAN 16...	<.008	<.06	<.02	<.06	K18	K7	K10	--	--	--	--	--	--
MAR 13...	.048	<.06	<.02	E.06	K40	K68	K30	--	--	--	--	--	--
MAY 16...	.012	.08	.04	.12	280	223	K406	--	1180	--	--	<.1	--
16...	E.005	E.04	.03	.12	300	480	540	115	1200	.6	<.04	E.1	<6
JUL 10...	<.008	<.06	<.02	E.03	25	K79	46	--	--	--	--	--	--
SEP 05...	<.008	E.03	E.01	E.05	K8	K11	K19	--	--	--	--	--	--
05...	<.008	<.06	E.01	E.04	K8	K9	K13	--	--	--	--	--	--

## MERAMEC RIVER BASIN

07016400 BOURBEUSE RIVER ABOVE UNION, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
15...	102	.12	<1	33.8	<.01	<.3	--	4
JAN								
16...	--	--	--	--	--	--	--	--
MAR								
13...	--	--	--	--	--	--	--	--
MAY								
16...	--	--	4	--	.01	E.2	--	9
16...	125	.18	3	17.6	.01	<.3	2	9
JUL								
10...	--	--	--	--	--	--	--	--
SEP								
05...	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.



## 07016500 BOURBEUSE RIVER AT UNION, MO

LOCATION.--Lat 38°26'39", long 90°59'41", in SW ¼ NW ¼ SE ¼ sec.26, T.43 N., R.1 W., Franklin County, Hydrologic Unit 07140103, on left bank at upstream side of the bridge on U.S. Highway 50, 800 ft upstream from Flat Creek, 0.5 mi east of Union, 7.0 mi upstream from Birch Creek, and at mile 13.4.

DRAINAGE AREA.--808 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1921 to current year. October 1916 to June 1921 gage heights only in reports of the National Weather Service.

REVISED RECORDS.--WSP 957: 1941. WSP 1147: Drainage area. WSP 1281: 1924.

GAGE.--Water-stage recorder. Datum of gage is 488.58 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1948, datum of all gages 3.00 ft higher. Prior to Oct. 21, 1933, nonrecording gage, at site 30 ft upstream; Oct. 21, 1933, to June 11, 1944, nonrecording gage, at present site.

REMARKS.--Records fair except for estimated daily discharges, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1915, reached a stage of 28.5 ft, present datum, from floodmarks, discharge, about 50,000 ft<sup>3</sup>/s, determined from extension of rating curve for main channel based on measurements made since 1921 and study of overflow areas in vicinity of gaging station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	26	98	2340	e198	9670	183	812	932	350	83	69	77
2	26	92	1640	e183	12800	480	651	708	292	78	64	70
3	25	81	777	e172	5840	3330	544	574	258	78	60	66
4	24	71	505	e163	1550	4380	477	478	229	76	57	63
5	46	66	375	146	1100	1670	424	405	312	71	55	56
6	39	62	297	143	844	1190	375	369	304	93	57	52
7	32	59	248	138	691	1150	340	508	274	95	55	49
8	29	57	214	133	589	1060	408	3600	485	74	50	46
9	30	56	187	129	516	884	474	10700	378	108	48	44
10	79	57	164	126	457	907	692	14500	372	108	46	42
11	64	55	147	123	403	1130	726	14200	388	133	50	40
12	76	51	160	120	360	899	604	2160	726	122	43	39
13	76	49	185	118	324	718	488	4660	2040	127	84	37
14	100	48	355	114	294	645	414	9550	1280	75	82	36
15	108	46	891	111	267	602	354	10900	713	63	58	36
16	125	43	1290	107	246	616	314	1960	491	59	53	34
17	98	42	5090	102	228	1410	282	1700	364	56	51	50
18	96	41	9220	100	212	1200	263	4630	282	98	70	54
19	90	41	6150	101	222	973	295	9360	229	102	62	89
20	90	40	1570	99	227	1640	2700	2990	193	100	1440	95
21	79	39	982	96	233	4230	7460	1330	166	509	873	72
22	71	39	724	94	269	2010	8040	949	145	424	559	70
23	70	38	584	95	278	1190	2970	749	128	314	382	56
24	102	205	497	101	265	870	1500	632	117	214	292	50
25	83	198	429	98	246	935	1020	551	105	162	229	49
26	72	380	370	97	227	1530	771	506	101	125	185	48
27	133	431	320	101	207	2190	695	501	100	103	154	46
28	276	353	285	106	195	1660	1040	495	94	88	127	51
29	193	329	256	114	---	1290	2130	481	97	79	108	48
30	146	607	232	317	---	1510	1450	421	100	78	95	44
31	117	---	216	3330	---	1140	---	392	---	74	84	---
MEAN	84.6	126	1184	232	1384	1407	1290	3287	370	128	182	53.6
MAX	276	607	9220	3330	12800	4380	8040	14500	2040	509	1440	95
MIN	24	38	147	94	195	183	263	369	94	56	43	34
IN.	0.12	0.17	1.69	0.33	1.78	2.01	1.78	4.69	0.51	0.18	0.26	0.07

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

	MEAN	298	530	651	642	799	1125	1294	1160	846	333	189	247
MAX	4575	3320	6107	3518	3214	4207	5303	4578	4583	3650	1927	4859	
(WY)	1950	1986	1983	1950	1985	1984	1994	1995	1942	1993	1993	1993	
MIN	15.0	28.0	35.4	30.7	41.1	42.0	94.9	66.6	33.7	23.9	21.0	19.2	
(WY)	1957	1954	1954	1956	1963	1954	1956	1932	1936	1936	1936	1956	

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1921 - 2002

ANNUAL MEAN	460	810	674	
HIGHEST ANNUAL MEAN			1771	1993
LOWEST ANNUAL MEAN			106	1954
HIGHEST DAILY MEAN	10600	Feb 26	14500	May 10
LOWEST DAILY MEAN	22	Sep 7	24	Oct 4
ANNUAL SEVEN-DAY MINIMUM	24	Sep 2	31	Oct 1
MAXIMUM PEAK FLOW	---		16300	May 11
MAXIMUM PEAK STAGE	---		18.36	May 11
INSTANTANEOUS LOW FLOW	---		23	Oct 4
ANNUAL RUNOFF (INCHES)	7.72		13.61	
10 PERCENT EXCEEDS	891		1600	
50 PERCENT EXCEEDS	117		198	
90 PERCENT EXCEEDS	32		49	

e Estimated

## MERAMEC RIVER BASIN

07017200 BIG RIVER AT IRONDALE, MO

LOCATION.--Lat 37°49'48", long 90°41'27", in SE ¼ SW ¼ sec.15, T.36 N., R.3 E., Washington County, Hydrologic Unit 07140104, on right bank 50 ft upstream from bridge on State Highway U, 0.2 mi upstream from Mill Creek, and 0.8 mi west of Irondale.

DRAINAGE AREA.--175 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1965 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 753.28 ft above National Geodetic Vertical Datum of 1929 (Missouri State Highway and Transportation Commission bench mark).

REMARKS.--Records fair except estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	4.2	10	154	42	1750	62	166	211	146	20	13	20
2	4.4	10	82	38	571	99	152	181	117	19	13	20
3	4.3	10	55	34	359	217	133	155	97	20	13	18
4	4.5	9.4	40	32	251	150	118	134	82	19	12	17
5	6.1	9.0	32	31	191	134	109	118	83	19	12	16
6	7.2	9.0	33	32	158	128	101	145	85	17	12	15
7	7.0	10	40	32	136	112	98	268	72	17	12	15
8	6.9	e9.7	34	31	113	102	702	16400	61	16	11	14
9	7.0	9.0	30	32	98	2980	478	5300	70	16	11	14
10	7.5	9.2	27	32	84	850	281	1130	96	18	11	14
11	9.6	8.9	24	31	72	523	214	699	87	61	13	13
12	12	8.9	24	30	65	669	180	1840	152	24	14	13
13	12	9.1	42	29	56	e475	181	7780	103	21	50	12
14	10	9.3	436	29	51	e301	546	1260	75	19	73	135
15	10	9.3	308	e30	47	e300	299	719	59	18	30	85
16	11	9.3	2000	28	44	e792	210	785	50	17	22	30
17	10	9.3	4380	26	40	e708	188	11900	41	17	19	112
18	9.6	9.3	843	26	38	e281	163	1890	36	17	264	146
19	9.2	9.2	435	30	94	1960	145	931	33	22	202	86
20	9.3	9.2	274	29	503	1740	164	648	31	19	794	225
21	9.3	9.2	200	28	255	741	555	479	30	17	178	158
22	9.2	9.2	162	28	167	459	287	378	28	16	95	77
23	13	9.3	132	30	129	345	206	314	26	16	63	49
24	66	20	107	59	109	278	228	270	24	16	50	38
25	51	20	90	88	92	1110	352	239	29	16	43	32
26	24	16	77	75	87	640	217	209	29	15	36	28
27	15	16	68	66	70	415	882	189	26	15	31	26
28	12	17	64	59	63	318	659	238	24	14	28	24
29	12	31	57	54	---	263	339	240	22	13	25	22
30	10	323	49	56	---	222	248	194	21	13	23	21
31	9.7	---	44	1980	---	192	---	172	---	13	22	---
MEAN	12.7	21.9	334	102	203	567	287	1788	61.2	18.7	70.8	49.8
MAX	66	323	4380	1980	1750	2980	882	16400	152	61	794	225
MIN	4.2	8.9	24	26	38	62	98	118	21	13	11	12
IN.	0.08	0.14	2.20	0.67	1.21	3.73	1.83	11.8	0.39	0.12	0.47	0.32

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1965 - 2002, BY WATER YEAR (WY)

MEAN	58.3	223	262	204	254	327	358	273	117	51.2	55.5	62.0
MAX	339	1147	1027	734	695	867	1329	1788	872	262	393	669
(WY)	1971	1994	1983	1969	1985	1978	1994	2002	1985	1981	1970	1993
MIN	6.95	10.5	13.7	11.1	24.9	38.9	39.7	17.3	9.95	4.69	4.27	3.10
(WY)	1981	1981	1977	1981	1977	1981	2000	2000	1980	1980	2000	2000

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1965 - 2002		
ANNUAL MEAN	81.6			296			187		
HIGHEST ANNUAL MEAN							449		
LOWEST ANNUAL MEAN							33.9		
HIGHEST DAILY MEAN	4380			Dec 17			21300		
LOWEST DAILY MEAN	3.6			Sep 8			1.2		
ANNUAL SEVEN-DAY MINIMUM	4.2			Sep 3			1.5		
MAXIMUM PEAK FLOW	---			26300			May 8		
MAXIMUM PEAK STAGE	---			21.32			May 8		
INSTANTANEOUS LOW FLOW	---			3.7			Oct 1		
ANNUAL RUNOFF (INCHES)	6.33			22.94			14.49		
10 PERCENT EXCEEDS	123			511			368		
50 PERCENT EXCEEDS	21			47			56		
90 PERCENT EXCEEDS	5.1			9.9			10		

e Estimated

07018100 BIG RIVER NEAR RICHWOODS, MO

LOCATION.--Lat 38°09'34", long 90°42'22", in sec.33, T.40 N., R.3 E., Jefferson County, Hydrologic Unit 07140104, on left bank at downstream side of bridge on State Highway H, 1.8 mi east of Fletcher, 6.8 mi east of Richwoods, and at mile 53.7.

DRAINAGE AREA.--735 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1942 to current year. Prior to May 1949 monthly discharge only, published in WSP 1311. Prior to 1984 published as Big River near De Soto (07018000).

GAGE.--Water-stage recorder. Datum of gage is 523.00 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 30, 1983 at site 5.5 mi downstream at datum 15.79 ft higher.

REMARKS.--Water-discharge records good. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of about 29.4 ft (former datum), discharge, about 70,500 ft<sup>3</sup>/s, from rating curve extended above 37,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	109	1020	229	8230	331	779	854	579	225	139	147
2	52	106	603	230	3240	353	700	762	516	216	136	139
3	51	104	398	213	1560	518	638	662	469	212	135	133
4	50	101	304	205	1110	626	567	578	433	243	132	127
5	61	97	250	198	862	585	508	511	419	268	129	120
6	69	93	222	191	715	540	466	506	425	229	135	114
7	70	92	228	191	631	508	437	1090	407	207	155	110
8	68	90	235	186	560	469	657	7740	384	194	150	106
9	65	88	210	184	496	4040	1700	21300	362	185	131	104
10	66	87	190	183	447	5840	1180	10700	431	216	124	104
11	71	85	174	183	402	2040	880	2620	392	352	128	104
12	92	84	175	177	366	1660	743	1840	1240	302	133	102
13	103	84	220	171	337	1590	664	14100	810	316	2040	102
14	111	84	457	166	312	1260	666	15000	626	299	1750	106
15	106	84	1260	161	294	1110	1000	2980	477	226	607	142
16	112	84	2090	157	279	1840	823	1890	402	201	402	135
17	110	85	10200	152	265	1680	693	5020	360	194	299	237
18	101	85	8060	149	253	1370	611	17300	333	188	274	356
19	90	84	2140	154	265	2070	566	4870	312	189	361	422
20	85	83	1320	157	628	6400	682	2150	295	187	1750	469
21	84	82	949	155	973	3500	1260	1600	289	177	1550	435
22	81	84	760	155	721	1880	1680	1300	274	173	691	440
23	84	90	644	158	565	1430	1120	1110	259	176	448	328
24	140	128	549	263	481	1200	861	968	248	189	355	254
25	462	180	467	289	429	2350	779	859	284	175	292	212
26	395	179	405	288	407	2960	888	767	454	165	256	188
27	245	157	364	300	381	1840	1070	697	312	158	247	174
28	182	148	332	278	350	1420	2550	696	281	151	214	164
29	148	169	303	260	---	1210	1540	944	254	144	188	157
30	129	803	275	288	---	1030	1050	792	238	141	170	152
31	118	---	246	2000	---	889	---	666	---	139	158	---
MEAN	118	128	1131	260	913	1759	925	3964	419	208	441	196
MAX	462	803	10200	2000	8230	6400	2550	21300	1240	352	2040	469
MIN	50	82	174	149	253	331	437	506	238	139	124	102
IN.	0.18	0.19	1.77	0.41	1.29	2.76	1.40	6.22	0.64	0.33	0.69	0.30

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002, BY WATER YEAR (WY)

	MEAN	268	650	818	712	927	1218	1291	1072	563	388	261	308
MAX	1641	4223	4332	3845	2935	2851	5642	3964	3150	2492	1357	4022	
(WY)	1950	1986	1983	1950	1985	1998	1994	2002	1985	1951	1950	1993	
MIN	47.5	87.9	90.5	84.0	124	123	175	148	110	86.0	69.9	40.6	
(WY)	1957	1977	1956	1977	1954	1954	2000	2001	1980	1980	1955	1956	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1949 - 2002	
ANNUAL MEAN	325		876		705	
HIGHEST ANNUAL MEAN					1766	
LOWEST ANNUAL MEAN					171	
HIGHEST DAILY MEAN	10200	Dec 17	21300	May 9	44400	Nov 15 1993
LOWEST DAILY MEAN	50	Oct 4	50	Oct 4	22	Sep 19 1954
ANNUAL SEVEN-DAY MINIMUM	52	Sep 28	58	Oct 1	26	Sep 13 1954
MAXIMUM PEAK FLOW	---		23900	May 9	59800	Sep 23 1993
MAXIMUM PEAK STAGE	---		21.30	May 9	30.33	Sep 23 1993
INSTANTANEOUS LOW FLOW	---		50	Oct 2-5	20	Sep 19 1954
ANNUAL RUNOFF (INCHES)	6.01		16.19		13.04	
10 PERCENT EXCEEDS	523		1690		1320	
50 PERCENT EXCEEDS	151		295		281	
90 PERCENT EXCEEDS	70		99		100	

## MERAMEC RIVER BASIN

07018100 BIG RIVER NEAR RICHWOODS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1963 to July 1975, November 1983 to June 1987, November 1992 to current year. August 1963 to July 1975 published as Big River near De Soto (07018000).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	OXYGEN,	OXYGEN,	pH	SPE-CIFIC CON-DUCT-ANCE	TEMPER-ATURE WATER	HARD-NESS	CALCIUM	MAGNE-SIUM	POTAS-SIUM	
			(cubic feet per second)	DIS-SOLVED	(per-cent satur-ation)	WATER WHOLE FIELD (stand-ard units)			TOTAL (mg/L as CaCO <sub>3</sub> )	DIS-SOLVED (mg/L as Ca)	DIS-SOLVED (mg/L as Mg)	DIS-SOLVED (mg/L as K)	
NOV 15...	0900	ENVIRONMENTAL	84	8.2	74	8.0	544	10.2	290	55.3	36.5	1.93	
JAN 16...	1140	ENVIRONMENTAL	156	13.2	102	7.2	508	3.6	--	--	--	--	
MAR 13...	0915	ENVIRONMENTAL	1430	11.3	96	8.0	318	7.1	--	--	--	--	
MAY 15...	1340	ENVIRONMENTAL	2760	8.4	88	7.9	288	17.1	140	30.8	15.7	1.36	
15...	1341	BLANK	--	--	--	--	--	--	--	.07	.009	<.10	
JUL 10...	1240	ENVIRONMENTAL	173	6.5	87	8.0	514	29.4	--	--	--	--	
SEP 04...	1550	ENVIRONMENTAL	125	6.6	86	7.9	498	27.4	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 15...	8.90	231	231	282	0	12.5	.2	53.1	<10	284	<.04	.14	<.05
JAN 16...	--	193	196	239	0	--	--	--	18	--	<.04	.13	.57
MAR 13...	--	122	123	150	0	--	--	--	28	--	<.04	.31	.42
MAY 15...	3.15	127	127	154	0	2.83	E.1	17.7	53	171	<.04	.34	.36
15...	.46	--	--	--	--	<.30	<.1	.1	<10	<10	<.04	<.10	<.05
JUL 10...	--	213	214	261	0	--	--	--	54	--	<.04	.14	.08
SEP 04...	--	216	218	266	0	--	--	--	<10	--	<.04	.13	<.05
DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 15...	<.008	<.06	<.02	<.06	K2	K3	K9	13	48	.3	.05	E.1	<6
JAN 16...	E.004	<.06	E.01	E.03	K1	K8	K9	--	--	--	--	--	--
MAR 13...	<.008	<.06	<.02	E.05	K210	480	217	--	--	--	--	--	--
MAY 15...	E.006	<.06	E.01	E.04	440	K186	780	108	551	.5	.45	1.4	E4
15...	<.008	<.06	<.02	<.06	--	--	--	8	8	<.2	<.04	<.1	<6
JUL 10...	<.008	<.06	<.02	<.06	K6	42	43	--	--	--	--	--	--
SEP 04...	<.008	<.06	<.02	<.06	K11	K8	K21	--	--	--	--	--	--

07018100 BIG RIVER NEAR RICHWOODS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
15...	40	4.79	18	19.6	<.01	<.3	--	9
JAN								
16...	--	--	--	--	--	--	--	--
MAR								
13...	--	--	--	--	--	--	--	--
MAY								
15...	121	15.7	216	32.2	E.01	E.3	49	83
15...	<10	<.08	<1	<2.0	<.01	<.3	<1	1
JUL								
10...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

07018500 BIG RIVER AT BYRNESVILLE, MO

LOCATION.--Lat 38°23'31", long 90°38'18", in SE  $\frac{1}{4}$  sec.12, T.42 N., R.3 E., Jefferson County, Hydrologic Unit 07140104, on right bank on downstream side of pier of privately owned bridge at Byrnesville, 4.0 mi upstream from Heads Creek, and at mile 14.1.

DRAINAGE AREA.--917 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1921 to current year. Prior to June 1922 monthly discharge only, published WSP 1311.

REVISED RECORDS.--WSP 667: 1927. WSP 877: 1938. WSP 1007: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 433.69 ft above National Geodetic Vertical Datum of 1929. Prior to Mar. 9, 1940, nonrecording gage at present site and datum.

REMARKS.--Records good except for estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 21, 1915, reached a stage of 30.2 ft from floodmarks, discharge, 80,000 ft<sup>3</sup>/s, by slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	66	155	811	e320	6410	398	954	1080	679	245	134	183
2	64	151	899	e294	7630	440	854	920	607	229	132	171
3	64	142	609	e272	2540	521	770	808	549	218	132	160
4	63	136	444	e261	1570	607	705	708	502	210	129	153
5	71	132	355	259	1180	685	641	630	471	221	126	146
6	75	128	300	254	957	649	587	649	454	247	125	139
7	77	125	263	247	817	606	549	1240	446	225	122	133
8	83	122	245	240	721	569	594	4230	426	204	131	129
9	85	119	255	236	644	1300	1090	12600	405	191	140	125
10	90	117	234	233	577	6700	1640	21600	428	191	132	121
11	104	115	217	228	521	4120	1180	12500	467	237	434	117
12	128	114	218	224	474	1900	943	2740	569	347	158	114
13	115	113	265	220	436	1730	818	7250	1170	317	425	112
14	123	112	395	213	405	1470	746	15200	778	281	2260	110
15	130	113	634	205	378	1260	774	15300	617	308	1190	112
16	151	113	2190	200	357	1530	1020	3270	503	237	629	124
17	140	112	7230	194	338	1950	844	2600	426	207	456	151
18	137	112	11300	190	320	1590	724	9420	382	196	359	212
19	133	111	6760	192	328	1610	656	16200	353	208	312	336
20	126	110	2020	189	375	5110	744	5460	330	190	417	427
21	117	108	1370	190	709	6470	1020	2210	311	187	1690	486
22	113	106	1060	188	938	2860	1620	1670	298	180	1190	463
23	112	105	874	189	729	1790	1510	1360	284	e192	694	461
24	124	247	740	199	602	1400	1090	1160	266	e204	513	385
25	166	199	639	255	527	2510	894	1020	254	180	407	309
26	337	200	557	307	479	3820	836	907	708	175	339	261
27	387	215	494	312	449	2800	1050	813	480	163	295	229
28	282	210	451	322	423	1830	2460	743	345	155	273	206
29	227	221	413	311	---	1490	2330	817	296	147	250	190
30	193	457	379	381	---	1280	1450	885	267	141	219	178
31	170	---	350	2180	---	1090	---	784	---	137	197	---
MEAN	137	151	1386	307	1137	2003	1036	4735	469	212	452	215
MAX	387	457	11300	2180	7630	6700	2460	21600	1170	347	2260	486
MIN	63	105	217	188	320	398	549	630	254	137	122	110
IN.	0.17	0.18	1.74	0.39	1.29	2.52	1.26	5.95	0.57	0.27	0.57	0.26

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	MEAN	324	699	873	905	1107	1438	1671	1448	821	481	295	346
MAX	2290	5084	5594	5064	3696	4539	7230	5196	4530	3895	1490	6464	
(WY)	1950	1994	1983	1950	1982	1945	1994	1990	1928	1957	1950	1993	
MIN	49.7	99.6	103	90.4	139	137	237	177	105	56.4	41.4	48.7	
(WY)	1957	1977	1956	1977	1954	1954	2000	1932	1936	1936	1936	1956	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1922 - 2002

ANNUAL MEAN	406	1025	867
HIGHEST ANNUAL MEAN			1934
LOWEST ANNUAL MEAN			227
HIGHEST DAILY MEAN	11300	Dec 18	57800
LOWEST DAILY MEAN	63	Sep 7, Oct 4	25
ANNUAL SEVEN-DAY MINIMUM	66	Sep 28	34
MAXIMUM PEAK FLOW	---		63600
MAXIMUM PEAK STAGE	---		29.37
INSTANTANEOUS LOW FLOW	---		25
ANNUAL RUNOFF (INCHES)	6.01	15.18	12.84
10 PERCENT EXCEEDS	699	1860	1720
50 PERCENT EXCEEDS	194	350	338
90 PERCENT EXCEEDS	84	122	117

e Estimated

07019000 MERAMEC RIVER NEAR EUREKA, MO

LOCATION.--Lat 38°30'20", long 90°35'30", in SE ¼ sec.32, T.44 N., R.4 E., St. Louis County, Hydrologic Unit 07140102, on right bank, 44 ft upstream from bridge on north access roadway of I-44, 2.0 mi east of Eureka, 3.0 mi downstream from Big River, and at mile 34.1.

DRAINAGE AREA.--3,788 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1903 to July 1906, October 1921 to current year. Monthly discharge only for January, February, and March 1904, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1938(M). WSP 977: 1942. WSP 1007: Drainage area. WSP 1281: 1924-25.

GAGE.--Water-stage recorder. Datum of gage is 404.18 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 17, 1933, nonrecording gage at site 200 ft upstream at different datum; Jan. 17, 1933, to Sept. 22, 1937, nonrecording gage; Sept. 23, 1937, to Sept. 30, 1971, water-stage recorder at present site at datum 2.00 ft higher.

REMARKS.--Records good. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Aug. 22, 1915, reached a stage of 42.2 ft, present datum, from floodmarks, discharge, 175,000 ft<sup>3</sup>/s, by slope-area measurement of peak flow.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	492	800	2580	1430	18300	1430	4550	5820	3800	1250	839	1060
2	481	769	4670	1350	26700	1710	3860	4670	3260	1210	813	998
3	478	722	3510	1290	26500	2780	3350	3860	2650	1160	807	959
4	474	697	2420	1250	13200	6980	3010	3400	2430	1160	797	926
5	458	679	1930	1220	6660	5870	2760	3080	2360	1180	820	898
6	470	665	1640	1140	5100	4010	2500	2940	2300	1230	805	883
7	489	657	1450	1100	4170	3430	2330	4380	2170	1250	837	911
8	506	656	1310	1070	3450	3300	2440	11700	2070	1200	761	857
9	508	644	1220	1050	3010	4250	2910	26500	2140	1160	786	848
10	566	640	1160	1030	2680	8830	3960	42200	2100	1170	798	787
11	630	630	1100	1020	2400	10100	4060	54700	2100	1260	946	750
12	719	635	1070	1000	2180	7160	3790	45100	2690	1400	937	759
13	648	633	1220	988	2000	5720	3330	24500	4690	1360	999	704
14	633	623	1350	980	1840	5010	3050	30800	5140	1300	2670	710
15	668	613	1870	962	1720	4500	2900	44800	3450	1310	2540	720
16	764	620	4920	940	1610	5130	3130	46000	2620	1210	2020	718
17	749	624	14300	926	1520	5400	3100	25500	2200	1180	1650	765
18	700	628	22100	915	1460	6150	2880	22400	1940	1120	1380	889
19	687	623	26900	916	1440	5550	2680	37500	1780	1140	1320	1050
20	668	618	14400	920	1520	9210	3190	49000	1700	1090	1790	1280
21	667	614	7050	910	1690	14800	9130	32600	1640	1080	5310	1310
22	656	620	5210	906	2110	14600	17600	10600	1520	1290	4770	1250
23	647	635	4010	902	1990	8790	15900	7420	1480	1410	3630	1220
24	654	993	3330	919	1850	6280	8780	6030	1460	1260	2650	1230
25	744	1100	2800	936	1730	7450	6130	5210	1440	1150	2110	1090
26	826	1060	2440	997	1670	10000	4900	4620	1670	1190	1760	975
27	985	1300	2160	1060	1560	11900	4680	4220	1640	1120	1550	916
28	987	1440	1930	1130	1470	9530	7840	3930	1450	1100	1420	864
29	1030	1430	1760	1170	---	7260	8200	4040	1330	1030	1290	836
30	910	2000	1670	1320	---	6360	7660	4720	1280	963	1170	801
31	839	---	1550	7580	---	5640	---	4100	---	908	1090	---
MEAN	669	812	4678	1269	5055	6746	5153	18590	2283	1188	1647	932
MAX	1030	2000	26900	7580	26700	14800	17600	54700	5140	1410	5310	1310
MIN	458	613	1070	902	1440	1430	2330	2940	1280	908	761	704
IN.	0.20	0.24	1.42	0.39	1.39	2.05	1.52	5.66	0.67	0.36	0.50	0.27

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	1404	2480	2998	3178	3896	5218	6257	5444	3611	1911	1195	1412
MAX	12120	15450	23620	17320	14730	13960	22580	18590	18070	12600	5441	18500
(WY)	1950	1986	1983	1950	1982	1978	1927	2002	1945	1951	1993	1993
MIN	236	464	426	374	538	514	945	708	503	318	255	244
(WY)	1957	1957	1956	1956	1954	1954	1954	1932	1936	1936	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	1819		4097		3236	
HIGHEST ANNUAL MEAN					7407	
LOWEST ANNUAL MEAN					751	
HIGHEST DAILY MEAN	26900	Dec 19	54700	May 11	139000	Dec 6 1982
LOWEST DAILY MEAN	449	Sep 7	458	Oct 5	196	Aug 27 1936
ANNUAL SEVEN-DAY MINIMUM	471	Sep 2	477	Oct 1	209	Aug 26 1936
MAXIMUM PEAK FLOW	---		56600	May 11	145000	Dec 6 1982
MAXIMUM PEAK STAGE	---		26.70	May 11	42.89	Dec 6 1982
INSTANTANEOUS LOW FLOW	---		434	Oct 4,5	196	Aug 27 1936
ANNUAL RUNOFF (INCHES)	6.52		14.69		11.61	
10 PERCENT EXCEEDS	3150		8430		6750	
50 PERCENT EXCEEDS	916		1450		1400	
90 PERCENT EXCEEDS	535		668		530	

## MERAMEC RIVER BASIN

07019072 KIEFER CREEK NEAR BALLWIN, MO

LOCATION.--Lat 38°33'19", long 90°33'06", in NW ¼ SE ¼ NE ¼ sec.15, T.44 N., R.4 E., St. Louis County, Hydrologic Unit 07140102, on left downstream abutment of Castlewood Road bridge, 0.2 mi upstream of Spring Branch, 3.2 mi west of Highway 141, and 1.3 mi upstream of Meramec River.

DRAINAGE AREA.--3.91 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 438.90 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	1.5	e1.3	5.1	1.7	24	1.9	4.7	6.3	3.6	2.5	1.2	1.5
2	e1.2	e1.5	3.3	1.7	10	13	4.6	5.8	3.0	2.6	1.2	1.2
3	0.94	e1.8	2.6	1.6	6.4	7.8	3.8	4.7	2.9	14	1.3	1.3
4	0.91	e1.5	2.2	1.6	4.9	5.1	3.4	4.4	2.6	4.6	1.3	1.4
5	e0.90	e1.2	1.8	1.5	4.0	4.0	3.3	4.0	5.6	2.0	1.8	1.4
6	1.9	e1.1	2.2	1.6	3.6	3.7	2.9	6.7	4.1	1.6	2.5	1.3
7	1.1	1.1	1.7	1.5	3.1	3.3	2.8	45	2.4	1.4	1.9	1.4
8	1.0	1.2	1.5	1.5	2.7	3.1	10	50	2.0	1.3	1.8	1.4
9	1.3	1.2	1.4	1.6	2.7	13	5.7	61	2.0	1.6	1.7	1.4
10	19	1.2	1.4	1.6	2.7	5.1	3.9	21	4.8	2.3	1.5	1.1
11	25	1.2	1.3	1.5	2.5	4.7	3.5	12	40	2.1	1.4	1.2
12	6.0	1.1	6.9	1.5	2.5	3.6	3.5	25	116	2.9	1.2	1.2
13	e4.0	1.1	7.2	1.5	2.2	2.9	3.6	66	14	2.4	2.2	0.95
14	2.9	1.1	11	1.5	2.2	2.6	3.1	22	7.8	1.9	2.8	1.1
15	2.0	1.0	5.0	1.4	2.2	4.0	2.8	13	5.8	1.7	1.6	1.2
16	5.6	0.97	45	1.4	2.2	5.4	2.6	13	4.4	1.7	1.4	1.2
17	3.1	0.92	46	1.5	2.0	4.2	3.5	32	3.8	1.8	1.4	4.3
18	1.9	0.94	13	1.6	2.0	3.8	2.6	21	3.3	1.8	7.8	5.9
19	1.6	1.3	5.9	2.2	4.2	7.4	5.0	13	3.1	1.8	4.3	20
20	1.5	1.0	4.1	2.0	5.2	8.9	12	10	3.2	1.6	2.4	12
21	e1.4	1.0	3.4	1.8	3.3	5.6	12	8.7	2.8	1.5	2.1	5.3
22	e1.2	1.0	3.8	1.8	2.5	5.5	7.5	7.5	1.9	1.5	2.0	3.2
23	e1.2	1.0	3.6	1.8	2.3	5.3	4.9	6.8	1.9	2.2	2.5	2.7
24	e4.0	45	2.7	3.4	2.2	5.2	8.7	6.9	1.9	1.4	2.5	2.5
25	e5.3	4.8	2.5	2.0	2.3	25	6.0	6.7	1.9	1.3	2.1	2.4
26	e2.6	3.2	2.4	1.8	2.6	13	4.5	6.2	1.9	1.4	1.9	2.1
27	e2.0	3.0	2.2	1.7	2.2	10	18	5.5	1.9	1.4	1.8	2.1
28	e1.8	6.9	2.1	1.6	2.1	7.6	19	5.2	1.7	1.4	1.7	1.9
29	e1.6	11	1.8	1.9	---	6.4	8.9	5.0	1.7	1.4	1.6	1.8
30	e1.5	14	1.8	30	---	6.2	7.1	4.8	2.1	1.2	1.5	1.8
31	e1.4	---	1.8	73	---	5.4	---	4.3	---	1.2	1.5	---
MEAN	3.46	3.82	6.34	4.93	3.96	6.54	6.13	16.2	8.47	2.24	2.06	2.94
MAX	25	45	46	73	24	25	19	66	116	14	7.8	20
MIN	0.90	0.92	1.3	1.4	2.0	1.9	2.6	4.0	1.7	1.2	1.2	0.95
IN.	1.02	1.09	1.87	1.45	1.05	1.93	1.75	4.79	2.42	0.66	0.61	0.84

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	3.36	4.13	3.01	4.91	7.86	6.88	5.07
MAX	6.61	10.7	6.35	10.3	12.5	16.1	7.65
(WY)	1997	1997	2002	1999	1999	1998	2002
MIN	1.86	1.35	1.35	1.41	3.96	2.75	1.97
(WY)	2000	2000	1999	2000	2002	2001	2000

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1996 - 2002

ANNUAL MEAN	3.58	5.61	4.95
HIGHEST ANNUAL MEAN			7.06
LOWEST ANNUAL MEAN			3.11
HIGHEST DAILY MEAN	46	Dec 17	251
LOWEST DAILY MEAN	0.73	Aug 7	0.61
ANNUAL SEVEN-DAY MINIMUM	0.86	May 11	0.70
MAXIMUM PEAK FLOW	---		2240 <sup>a</sup>
MAXIMUM PEAK STAGE	---		8.20
INSTANTANEOUS LOW FLOW	---		0.90
ANNUAL RUNOFF (INCHES)	12.42	19.49	17.19
10 PERCENT EXCEEDS	6.6	12	9.3
50 PERCENT EXCEEDS	1.7	2.4	2.2
90 PERCENT EXCEEDS	1.0	1.2	1.0

e Estimated

<sup>a</sup> From rating extended above 251 ft<sup>3</sup>/s.



## 331

WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 10...	0744	ENVIRONMENTAL	108	9.0	93	7.4	230	16.5	85	26.4	4.68	63
DEC 11...	0950	ENVIRONMENTAL	1.3	9.3	90	6.8	876	13.1	340	105	18.0	228
FEB 05...	1142	ENVIRONMENTAL	3.8	9.4	89	7.2	820	12.5	260	82.0	13.0	196
MAY 29...	1350	ENVIRONMENTAL	5.7	9.1	90	7.1	818	13.9	330	105	16.0	243
AUG 06...	1010	ENVIRONMENTAL	1.7	9.4	93	7.2	839	14.0	230	71.0	13.0	237

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 10...	61	75	0	--	315	E1.6	.14	.870	.02	.380	.56	5.3	19
DEC 11...	231	282	0	80.8	<1	<.20	.03	E1.80	<.01	.040	E.04	72	13
FEB 05...	197	240	0	94.0	15	.30	<.01	1.90	<.01	.040	.05	27	<5
MAY 29...	244	298	0	--	3	<.20	.01	1.70	<.01	.020	<.02	35	7
AUG 06...	237	289	0	--	5	.20	<.01	1.80	<.01	.020	.03	30	8

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECov- ERABLE (µg/L as Hg) (71900)
OCT 10...	28000	34000	24800	736	2	<1	1.0	1.0	2.8	516	<1	31	.1
DEC 11...	K70	K114	35	3	2	1	1.0	1.0	1.0	3	<1	25	<.1
FEB 05...	K20	K40	K69	30	<1	<1	<1.0	1.7	<1.0	16	<1	30	<.1
MAY 29...	160	105	380	5	<1	<1	<1.0	<1.0	<1.0	6	<1	51	<.1
AUG 06...	160	320	K138	<3	<1	<1	<1.0	<1.0	<1.0	3	<1	13	<.1

[illegible]

## MERAMEC RIVER BASIN

07019072 KIEFER CREEK NEAR BALLWIN, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07019072 KIEFER CREEK NEAR BALLWIN, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER TOTAL (µg/L) (34694)	PHORATE TOTAL (µg/L) (39023)
OCT 10...	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0	<.02
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 10...	M	<1	<2	<2	<2	<2	<2	<3	<5
DEC 11...	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

07019090 WILLIAMS CREEK NEAR PEERLESS PARK, MO

LOCATION.--Lat 38°32'04", long 90°30'51", St. Louis County, Hydrologic Unit 07140102, on left downstream wingwall of Meramec Station Road bridge, 0.1 mi south of Interstate 44, 1.01 mi west of Highway 141, and 0.6 mi upstream of Meramec River.

DRAINAGE AREA.--7.62 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 415.75 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.63	0.84	12	2.3	60	1.2	8.8	17	4.3	1.4	0.84	0.36
2	0.63	1.1	6.6	2.0	30	8.7	7.7	13	3.9	1.3	0.84	0.36
3	0.63	1.5	4.6	1.9	20	17	5.5	8.9	3.7	1.2	0.72	0.35
4	0.63	1.2	3.4	1.8	13	9.6	4.4	7.0	3.2	1.2	0.53	0.29
5	1.3	0.85	2.7	1.8	9.8	6.9	4.5	5.5	3.1	1.2	0.53	0.29
6	2.3	0.69	2.3	1.8	8.0	6.2	3.8	7.1	3.0	1.1	0.53	0.29
7	1.3	0.63	2.0	1.7	6.3	5.0	3.6	42	2.6	1.0	0.53	0.29
8	0.96	0.63	1.8	1.5	5.1	4.3	8.4	94	2.5	0.96	0.47	0.31
9	0.78	0.63	1.6	1.5	4.5	29	7.9	89	2.4	0.96	0.45	0.29
10	6.9	0.63	1.4	1.5	3.7	24	6.0	43	2.5	0.99	0.45	0.29
11	10	0.63	1.3	1.3	2.6	17	5.8	e19	4.6	1.1	0.45	0.33
12	15	0.57	2.2	1.2	2.4	13	5.3	e34	25	1.1	0.62	0.36
13	5.4	0.53	8.8	1.2	1.9	8.9	4.6	e74	18	1.1	0.71	0.36
14	4.3	0.53	16	1.2	1.7	6.9	4.5	38	9.4	1.1	1.2	0.35
15	3.2	0.62	13	1.2	1.7	8.0	4.2	e20	6.3	0.99	0.95	0.42
16	9.8	0.59	43	1.0	1.4	20	3.5	e22	5.0	0.87	0.66	0.45
17	5.0	0.53	78	0.96	1.2	15	3.0	e62	3.8	0.84	0.53	0.50
18	2.9	0.53	31	0.84	1.0	11	2.6	40	3.3	0.78	1.8	1.5
19	2.0	0.53	19	0.84	2.2	15	2.9	29	3.0	0.73	2.6	1.6
20	1.5	0.53	13	0.95	5.0	27	7.1	e20	2.5	0.73	1.2	2.9
21	1.1	0.47	10	1.1	2.8	21	19	e16	2.4	0.73	0.92	2.4
22	1.0	0.53	8.7	1.1	2.0	15	30	14	2.2	0.75	0.68	1.2
23	1.1	0.51	7.5	1.0	1.9	13	18	12	2.1	0.76	0.54	0.79
24	5.3	21	6.3	1.5	1.9	10	14	10	1.9	0.73	0.60	0.53
25	6.6	7.9	5.2	1.6	1.9	32	13	9.4	1.9	0.73	0.63	0.40
26	3.0	3.7	4.6	1.4	1.8	33	8.8	7.9	1.8	0.73	0.58	0.36
27	2.0	2.7	4.1	1.2	1.6	29	32	7.0	1.7	0.73	0.50	0.42
28	1.4	4.5	3.9	1.2	1.3	23	69	6.3	1.6	0.73	0.45	0.39
29	1.2	9.1	3.2	1.2	---	18	34	5.9	1.6	0.73	0.41	0.35
30	1.0	24	2.7	9.5	---	14	23	5.5	1.5	0.81	0.36	0.32
31	0.84	---	2.5	86	---	10	---	4.8	---	0.84	0.36	---
MEAN	3.22	2.96	10.4	4.36	7.02	15.2	12.2	25.3	4.36	0.93	0.73	0.64
MAX	15	24	78	86	60	33	69	94	25	1.4	2.6	2.9
MIN	0.63	0.47	1.3	0.84	1.0	1.2	2.6	4.8	1.5	0.73	0.36	0.29

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

MEAN	1.56	1.80	3.12	4.68	9.98	11.7	9.13	9.98	6.78	3.35	2.44	1.17
MAX	3.22	2.96	10.4	11.1	21.5	30.5	17.8	25.3	16.7	8.27	5.75	1.75
(WY)	2002	2002	2002	1999	1999	1998	1998	2002	1998	1998	1998	2000
MIN	0.75	0.62	0.91	0.76	1.96	1.69	1.25	1.71	1.98	0.93	0.73	0.56
(WY)	2000	2000	1999	2000	2000	2000	2000	2001	2001	2002	2002	1999

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

ANNUAL MEAN	3.79	7.30	5.45
HIGHEST ANNUAL MEAN			9.20
LOWEST ANNUAL MEAN			2.61
HIGHEST DAILY MEAN	78	94	208
LOWEST DAILY MEAN	0.47	0.29	0.29
ANNUAL SEVEN-DAY MINIMUM	0.52	0.29	0.29
MAXIMUM PEAK FLOW	---	212	583 <sup>a</sup>
MAXIMUM PEAK STAGE	---	6.74	9.31
INSTANTANEOUS LOW FLOW	---	0.29	0.29
10 PERCENT EXCEEDS	8.7	20	13
50 PERCENT EXCEEDS	1.9	2.0	1.6
90 PERCENT EXCEEDS	0.74	0.53	0.64

e Estimated

<sup>a</sup> From rating extended above 305 ft<sup>3</sup>/s.

## 335

WATER-QUALITY RECORDS

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07019090 WILLIAMS CREEK NEAR PEERLESS PARK, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER TOTAL (µg/L) (34694)
OCT 24...	<4	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 24...	<.02	M	<1	<2	<2	<2	<2	<2	<3	<5
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--
MAY 29...	--	--	--	--	--	--	--	--	--	--
29...	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

07019120 FISHPOT CREEK AT VALLEY PARK, MO

LOCATION.--Lat 38°33'07", long 90°30'41", in NE ¼ NE ¼ SE ¼ sec.13, T.44 N., R.4 E., St. Louis County, Hydrologic Unit 07140102, on right downstream abutment of Hanna Road bridge, 4.4 mi west of Interstate 270, 1.0 mi north of Interstate 44, and 1.7 mi upstream of confluence of Meramec River.

DRAINAGE AREA.--9.58 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year. Annual peaks only for 1972-1974 water years published in WRD MO 1974.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 422.02 ft above National Geodetic Vertical Datum of 1929. Prior to July 1996, at datum 420.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records fair except for estimated daily discharges and those above 2,000 ft<sup>3</sup>/s, which are poor.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of April 11, 1979 reached a stage of 12.00 ft, former datum, discharge 6,200 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.11	0.77	e0.15	7.6	0.22	0.50	0.38	0.28	0.00	0.00	0.00
2	0.00	0.19	0.43	e0.14	2.1	32	0.48	0.27	0.28	0.00	0.00	0.00
3	0.00	0.11	0.31	e0.13	1.5	e16	0.48	0.22	0.28	33	0.00	0.00
4	0.00	0.06	0.28	e0.12	0.97	e0.90	0.48	0.18	0.36	1.0	0.00	0.00
5	16	0.04	0.23	e0.11	0.74	0.65	0.44	0.15	4.9	0.32	0.00	0.00
6	0.35	0.04	0.21	e0.10	0.61	0.54	0.37	2.8	0.39	0.24	0.00	0.00
7	0.18	0.12	0.18	e0.09	0.54	0.45	0.35	120	0.27	0.19	0.00	0.00
8	0.12	0.22	0.15	e0.09	0.45	0.41	19	130	0.24	0.14	0.00	0.00
9	0.09	0.15	0.15	e0.08	0.39	39	0.61	130	0.34	0.09	0.00	0.00
10	98	0.13	0.13	e0.08	0.45	1.1	0.39	1.8	3.5	0.08	0.00	0.00
11	72	0.10	0.11	0.07	0.49	0.70	0.28	1.1	81	0.08	0.00	0.00
12	11	0.08	18	0.07	0.48	0.55	0.35	53	288	0.05	0.00	0.00
13	0.99	0.06	2.7	0.06	0.45	0.50	0.24	148	2.3	0.02	0.00	0.00
14	0.50	0.04	25	0.06	0.42	0.48	0.24	2.2	1.2	0.00	0.00	0.00
15	23	0.03	0.97	0.05	0.39	17	0.21	1.5	0.82	0.00	0.00	0.00
16	8.1	0.02	142	0.05	0.37	2.0	0.18	8.8	0.64	0.00	0.00	0.00
17	0.26	0.01	91	0.04	0.37	0.83	0.19	81	0.49	0.00	0.00	0.02
18	0.18	0.01	2.8	0.04	0.33	0.65	0.16	4.1	0.39	0.00	13	0.12
19	0.16	0.03	1.6	0.12	5.6	6.8	8.3	1.4	0.30	0.00	0.17	38
20	0.13	0.02	1.1	0.12	0.97	2.6	18	0.99	0.25	0.00	0.10	2.0
21	0.11	0.00	0.78	0.08	0.51	0.84	13	0.71	0.19	0.00	0.07	0.08
22	0.16	0.00	0.81	0.06	0.38	0.65	0.72	0.57	0.14	0.00	0.04	0.05
23	0.27	0.00	0.64	0.11	0.33	0.61	0.36	0.50	0.08	0.00	0.04	0.04
24	23	144	0.46	0.27	0.32	0.62	21	0.48	0.05	0.00	0.04	0.03
25	0.42	0.65	0.38	0.13	0.28	66	0.92	0.39	0.03	0.00	0.01	0.03
26	0.28	0.46	0.32	0.09	0.32	3.7	0.34	0.37	0.02	0.00	0.00	0.02
27	0.25	0.27	0.27	0.08	0.28	1.3	54	0.37	0.00	0.00	0.00	0.01
28	0.21	10	0.22	0.07	0.25	0.81	16	0.36	0.00	0.00	0.00	0.00
29	0.17	15	e0.20	0.16	---	0.68	0.78	0.33	0.00	0.00	0.00	0.00
30	0.15	34	e0.18	96	---	0.62	0.51	0.31	0.00	0.00	0.00	0.00
31	0.13	---	e0.16	199	---	0.62	---	0.29	---	0.00	0.00	---
MEAN	8.26	6.86	9.44	9.61	1.00	6.45	5.30	22.3	12.9	1.14	0.44	1.35
MAX	98	144	142	199	7.6	66	54	148	288	33	13	38
MIN	0.00	0.00	0.11	0.04	0.25	0.22	0.16	0.15	0.00	0.00	0.00	0.00
IN.	0.99	0.80	1.14	1.16	0.11	0.78	0.62	2.69	1.50	0.14	0.05	0.16

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	MEAN	2.67	5.78	2.29	5.60	12.1	6.66	3.97	11.4	13.0	3.87	2.20	3.27
MAX	8.26	20.9	9.44	9.61	19.0	21.5	6.23	28.2	31.5	12.5	4.95	16.3	
(WY)	2002	1997	2002	2002	2000	1998	1998	2000	2000	1998	1998	1996	
MIN	0.42	0.17	0.16	0.22	1.00	0.78	0.26	1.48	0.80	0.83	0.09	0.07	
(WY)	1999	2000	1999	2000	2002	2000	2000	1997	1999	1997	2001	1999	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1996 - 2002

ANNUAL MEAN	5.01	7.14	5.86	
HIGHEST ANNUAL MEAN			7.88	1998
LOWEST ANNUAL MEAN			3.38	2001
HIGHEST DAILY MEAN	149	Feb 24	710	Jun 24 2000
LOWEST DAILY MEAN	0.00	Many Days	0.00	Many Years
ANNUAL SEVEN-DAY MINIMUM	0.00	At Times	0.00	At Times
MAXIMUM PEAK FLOW	---		3810 <sup>a</sup>	Jun 12
MAXIMUM PEAK STAGE	---		8.73	Jun 12
INSTANTANEOUS LOW FLOW	---		0.00	Many Days
ANNUAL RUNOFF (INCHES)	7.10		10.13	
10 PERCENT EXCEEDS	8.3		12	
50 PERCENT EXCEEDS	0.14		0.24	
90 PERCENT EXCEEDS	0.00		0.00	

e Estimated

<sup>a</sup> From rating extended above 995 ft<sup>3</sup>/s.



## MERAMEC RIVER BASIN

339

07019120 FISHPOT CREEK AT VALLEY PARK, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	
DATE	TIME	SAMPLE TYPE											
OCT 10...	0715	ENVIRONMENTAL	808	7.5	80	8.0	124	16.9	45	14.5	2.25	51	
DEC 11...	1055	ENVIRONMENTAL	.10	6.1	51	6.9	562	7.3	210	67.8	10.4	155	
FEB 05...	1250	ENVIRONMENTAL	.79	12.3	95	7.1	614	4.4	200	64.0	10.0	146	
MAR 09...	0426	ENVIRONMENTAL	89	9.2	88	7.6	1040	12.1	150	47.0	7.30	73	
MAY 29...	1055	ENVIRONMENTAL	.32	4.9	55	7.3	644	19.5	230	73.0	11.0	165	
AUG 06...	0900	ENVIRONMENTAL	e.01	2.6	32	7.1	657	26.1	210	66.0	9.80	198	
DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 10...	44	E53	0	--	2160	E3.6	.04	.580	.01	.290	1.20	1.1	19
DEC 11...	157	192	0	46.2	<1	<.20	.03	.400	<.01	.140	E.13	40	12
FEB 05...	146	178	0	72.0	<1	.30	<.01	1.40	<.01	.110	.12	25	8
MAR 09...	73	89	0	--	594	2.0	.11	.740	.03	.170	.60	3.6	25
MAY 29...	170	207	0	--	4	<.20	.04	.300	<.01	.120	.13	16	6
AUG 06...	200	244	0	--	5	.30	.02	.020	<.01	.100	.15	29	10
DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 10...	40000	60000	39200	1060	2	<1	1.0	1.0	2.5	997	2	52	.1
DEC 11...	K20	K53	K48	<3	<1	1	1.0	1.0	1.0	45	<1	97	<.1
FEB 05...	K5	K10	250	27	1	<1	<1.0	<1.0	1.0	26	<1	30	<.1
MAR 09...	4800	9000	11600	274	2	<1	<1.0	2.6	2.3	170	<1	50	<.1
MAY 29...	25	33	72	6	<1	<1	<1.0	<1.0	1.1	14	<1	153	<.1
AUG 06...	K7	K60	164	<3	1	<1	<1.0	<1.0	<1.0	4	<1	800	<.1

WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07019120 FISHPOT CREEK AT VALLEY PARK, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 10...	E1	M	<.01	<.009	<.01	<2	E1	M	<.006	<.20	<.020	<.01	<.006
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	M	M	<.01	<.009	<.01	<2	M	M	<.006	E.23	<.015	<.02	<.006
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER (µg/L) (34694)
OCT 10...	<4	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	WAT UNF REC (µg/L) (34551)	BENZENE 1,2,4- TRI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34396)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 10...	<.02	E1	<1	<2	<2	<2	<2	<2	<2	<3	M
DEC 11...	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	M	<1	<2	<2	<2	<2	<2	<2	<1	M
MAY 29...	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

07019150 GRAND GLAIZE CREEK NEAR MANCHESTER, MO

LOCATION.--Lat 38°35'33", long 90°29'35", in NE ¼ SE ¼ SE ¼ sec.31, T.45 N., R.5 E., St. Louis County, Hydrologic Unit 07140102, on left downstream abutment of Weidmann Road bridge, 0.15 mi south of Highway 100, 1.1 mi west of Interstate 270, and 6.9 mi upstream of confluence of Meramec River.

DRAINAGE AREA.--5.09 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.11	0.24	2.1	0.32	5.4	0.60	1.2	0.99	1.0	e0.21	0.47	0.11
2	0.11	1.3	1.3	0.33	1.9	29	1.6	0.80	0.96	e0.23	0.25	0.09
3	0.10	0.16	1.1	0.40	1.4	3.3	1.0	0.69	0.90	22	0.16	0.11
4	0.10	0.13	0.98	0.58	0.97	1.8	0.88	0.63	1.7	1.6	0.13	0.06
5	23	0.13	1.1	0.61	0.72	2.0	0.88	0.59	13	0.70	0.08	0.10
6	0.20	0.14	1.4	0.97	0.65	1.6	0.84	6.5	1.5	0.39	2.8	0.12
7	0.10	0.12	0.83	0.68	0.55	1.2	1.7	78	1.00	0.32	0.40	0.08
8	0.10	0.14	0.68	0.55	0.43	1.2	18	63	0.89	0.36	0.14	0.06
9	0.11	0.14	0.63	0.95	0.49	27	2.9	74	2.0	0.38	0.12	0.18
10	54	0.15	0.60	3.6	1.6	2.2	1.4	5.1	11	1.3	0.10	0.11
11	41	0.15	0.60	2.5	0.72	1.7	1.1	3.6	56	0.44	0.13	0.06
12	7.7	0.15	23	0.45	0.57	1.5	2.1	44	194	0.68	0.63	0.00
13	2.7	0.13	4.2	0.40	0.50	1.2	1.1	79	e2.8	0.39	6.9	0.08
14	0.22	0.14	23	0.42	0.51	1.2	1.2	3.9	e0.94	0.28	1.9	0.15
15	19	0.12	4.2	0.35	0.57	15	0.84	2.6	e0.66	0.25	0.50	0.63
16	6.2	0.11	88	0.36	0.55	3.1	0.75	9.6	e0.56	6.7	0.39	0.14
17	0.23	0.10	48	0.31	0.52	1.7	1.8	45	e0.49	0.91	0.28	11
18	0.17	0.31	4.1	0.32	0.55	1.4	0.67	5.8	e0.46	0.36	23	0.83
19	0.19	0.26	2.2	2.8	11	13	11	2.8	e0.42	0.29	1.1	32
20	0.16	0.13	1.5	0.99	2.5	5.2	17	2.1	e0.39	0.29	0.90	10
21	0.14	0.12	1.4	0.81	1.1	2.1	13	1.7	e0.35	0.33	0.30	0.60
22	0.15	0.13	4.3	0.67	0.78	1.6	1.5	1.6	e0.31	1.3	0.20	0.19
23	5.8	0.13	1.5	2.9	0.64	1.4	0.75	1.4	e0.29	2.6	1.5	0.14
24	21	85	1.0	3.1	0.62	4.4	12	3.4	e2.5	0.42	0.49	0.34
25	0.40	1.8	0.84	0.75	1.7	39	1.3	1.6	e0.70	0.38	0.17	0.13
26	0.34	3.3	0.74	0.59	1.6	9.8	0.55	1.3	e0.35	0.29	0.13	0.12
27	0.30	1.3	0.98	0.56	0.74	3.1	32	1.2	e0.33	0.19	0.13	0.14
28	0.27	16	0.70	0.55	0.63	2.1	7.6	1.9	e0.31	0.16	0.10	0.18
29	0.27	22	0.59	3.2	---	2.0	1.2	1.5	e0.27	0.11	0.61	0.19
30	0.28	21	0.45	75	---	1.5	0.83	1.2	e0.23	0.31	0.41	0.19
31	0.25	---	0.39	94	---	1.3	---	1.1	---	0.12	0.13	---
MEAN	5.96	5.17	7.18	6.45	1.42	5.91	4.62	14.4	9.88	1.43	1.44	1.94
MAX	54	85	88	94	11	39	32	79	194	22	23	32
MIN	0.10	0.10	0.39	0.31	0.43	0.60	0.55	0.59	0.23	0.11	0.08	0.00

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	2.92	3.26	2.52	5.74	7.73	7.87	5.72	10.5	11.2	3.56	3.00	1.74
MAX	5.96	5.17	7.17	13.0	12.6	19.9	9.61	22.0	27.7	9.57	5.92	2.67	
(WY)	2002	2002	2002	1999	1999	1998	1999	2000	2000	1998	1998	1998	
MIN	1.39	1.03	0.38	0.89	1.43	2.96	2.92	3.61	2.13	0.43	0.78	0.30	
(WY)	2000	2000	1999	2000	2002	2001	2000	1998	1997	1997	2001	1999	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1997 - 2002

ANNUAL MEAN	4.27	5.52	5.65	
HIGHEST ANNUAL MEAN			7.66	1998
LOWEST ANNUAL MEAN			3.41	2001
HIGHEST DAILY MEAN	116	Feb 24	562	Jun 24 2000
LOWEST DAILY MEAN	0.01	Aug 15	0.00	Several Years
ANNUAL SEVEN-DAY MINIMUM	0.09	Aug 1	0.08	At Times
MAXIMUM PEAK FLOW	---		3600 <sup>a</sup>	Jun 24 2000
MAXIMUM PEAK STAGE	---		7.95	Jun 12
INSTANTANEOUS LOW FLOW	---		0.00	Sep 4,5,11-13
10 PERCENT EXCEEDS	12		11	Several Years
50 PERCENT EXCEEDS	0.40		0.74	
90 PERCENT EXCEEDS	0.12		0.13	

e Estimated

a From rating extended above 466 ft<sup>3</sup>/s.

## 07019175 SUGAR CREEK AT KIRKWOOD, MO

LOCATION.--Lat 38°34'36", long 90°27'52", in SE ¼ SE ¼ SW ¼ sec.4, T.44 N., R.5 E., St. Louis County, Hydrologic Unit 07140102, gage attached to left upstream abutment of Barrett Station Road bridge, 2.3 mi north of Interstate 44, 1.1 mi west of Interstate 270, and 4.7 mi upstream from confluence of Meramec River.

DRAINAGE AREA.--5.08 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.13	0.30	1.4	0.27	8.5	5.3	0.79	1.7	0.80	0.21	0.19	0.26
2	0.12	0.74	0.78	0.27	3.1	21	1.2	1.3	0.71	0.21	0.21	0.20
3	0.12	0.40	0.74	0.27	1.8	5.2	0.91	1.2	0.71	0.25	0.24	0.17
4	0.11	0.33	0.66	0.26	1.1	2.2	1.5	1.3	0.66	0.24	0.18	0.15
5	8.5	0.31	0.67	0.23	0.86	2.1	1.0	1.3	4.4	0.29	0.24	0.11
6	0.26	0.31	1.1	0.27	0.75	1.7	0.73	7.8	1.6	0.22	0.87	0.18
7	0.11	0.31	0.62	0.26	0.82	1.6	0.59	93	1.1	0.19	0.41	0.18
8	0.11	0.33	0.48	0.23	0.75	2.9	9.4	62	0.67	0.20	0.34	0.17
9	0.10	0.32	0.46	0.24	0.74	30	1.8	89	0.76	0.24	0.33	0.14
10	52	0.31	0.41	0.22	0.91	2.5	1.1	6.4	2.1	0.32	0.35	0.14
11	50	0.34	0.40	0.23	0.78	1.7	0.97	4.3	86	0.37	0.36	0.15
12	5.0	0.35	13	0.26	0.66	1.4	2.1	24	186	0.37	0.40	0.12
13	2.6	0.36	3.1	0.26	0.58	0.95	1.1	92	2.3	0.35	1.7	0.10
14	0.50	0.35	19	0.29	0.62	0.83	1.2	6.1	0.89	0.26	0.70	0.10
15	9.4	0.38	2.5	0.29	0.48	14	0.90	4.1	0.64	0.23	0.59	0.35
16	3.7	0.37	67	0.30	0.36	3.2	0.79	7.2	0.54	0.23	0.63	0.25
17	0.39	0.38	57	0.33	0.24	1.5	0.77	53	0.47	0.28	0.33	6.0
18	0.24	0.44	4.7	0.29	0.26	1.0	0.68	8.3	0.43	0.78	10	0.77
19	0.22	0.66	2.0	0.41	8.1	11	9.9	4.4	0.39	0.29	1.3	5.6
20	0.17	0.44	1.1	0.42	3.7	4.6	8.7	3.1	0.37	0.21	1.7	6.8
21	0.20	0.39	0.80	0.48	1.9	1.9	12	2.4	0.34	0.20	0.53	0.31
22	0.21	0.35	1.6	0.60	1.4	1.4	2.7	2.1	0.31	0.19	0.48	0.18
23	3.0	0.31	0.70	1.3	e0.90	1.1	1.6	2.0	0.30	0.44	0.62	0.16
24	16	87	0.52	1.8	e0.70	1.6	21	2.3	2.1	0.36	0.63	0.15
25	0.65	1.1	0.43	0.70	e1.2	30	3.3	1.8	0.65	0.26	0.51	0.13
26	0.59	1.2	0.38	0.56	e2.1	7.1	1.8	1.4	0.32	0.25	0.42	0.14
27	0.52	0.66	0.37	0.42	e0.80	3.0	37	1.2	0.26	0.23	0.40	0.16
28	0.47	9.9	0.36	0.34	e0.58	2.0	12	5.3	0.27	0.18	0.31	0.13
29	0.52	6.5	0.32	4.8	---	1.5	3.4	1.9	0.23	0.14	0.30	0.15
30	0.43	18	0.29	63	---	2.2	2.3	1.1	0.23	0.18	0.35	0.15
31	0.36	---	0.27	108	---	0.94	---	0.90	---	0.17	0.25	---
MEAN	5.06	4.44	5.91	6.05	1.60	5.40	4.77	15.9	9.88	0.27	0.83	0.79
MAX	52	87	67	108	8.5	30	37	93	186	0.78	10	6.8
MIN	0.10	0.30	0.27	0.22	0.24	0.83	0.59	0.90	0.23	0.14	0.18	0.10

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	2.18	2.47	2.40	4.71	6.90	6.63	4.59	9.58	11.0	3.78	2.05	0.91
MAX	5.06	4.44	5.91	10.1	16.2	19.4	7.97	18.7	19.2	10.6	3.64	1.51	
(WY)	2002	2002	2002	1999	1999	1998	1998	2000	2000	1998	2000	2001	
MIN	1.19	0.71	0.75	1.18	1.60	1.89	1.43	2.31	2.54	0.27	0.40	0.20	
(WY)	1998	2000	2001	2000	2002	2001	2000	1998	1999	2002	2001	1999	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1997 - 2002

ANNUAL MEAN	3.37	5.11	4.79	
HIGHEST ANNUAL MEAN			6.73	1998
LOWEST ANNUAL MEAN			2.46	2001
HIGHEST DAILY MEAN	98	Jun 20	465	May 7 2000
LOWEST DAILY MEAN	0.10	Oct 9	0.02	Sep 26 1999
ANNUAL SEVEN-DAY MINIMUM	0.13	Sep 28	0.04	Sep 5 1999
MAXIMUM PEAK FLOW	---		1620 <sup>a</sup>	Jun 24 2000
MAXIMUM PEAK STAGE	---		15.24	Jun 12
INSTANTANEOUS LOW FLOW	---		0.08	Oct 9,10
10 PERCENT EXCEEDS	6.0		6.7	
50 PERCENT EXCEEDS	0.52		0.75	
90 PERCENT EXCEEDS	0.24		0.24	

e Estimated

<sup>a</sup> From rating extended above 259 ft<sup>3</sup>/s.

## MERAMEC RIVER BASIN

07019185 GRAND GLAIZE CREEK NEAR VALLEY PARK, MO

LOCATION.--Lat 38°33'59", long 90°28'21", in NW ¼ NW ¼ SW ¼ sec.9, T.44 N., R.5 E., St. Louis County, Hydrologic Unit 07140102, on right upstream abutment of Quinette Road bridge, 1.7 mi north of Interstate 44, 1.8 mi west of Interstate 270, and 3.46 mi upstream of confluence of Meramec River.

DRAINAGE AREA.--21.8 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Water-discharge records fair except for discharges below 1 ft<sup>3</sup>/s and above 3,000 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.33	2.0	13	2.5	57	2.6	9.1	12	3.9	1.2	0.51	0.57
2	0.39	19	7.6	2.3	22	130	10	9.2	3.0	1.0	0.64	0.54
3	1.7	4.6	6.1	2.5	16	22	7.3	7.0	2.6	26	0.67	0.49
4	1.7	2.0	5.4	2.3	11	8.8	5.8	6.5	3.7	6.1	0.55	0.47
5	65	1.9	5.3	3.2	9.5	8.4	6.9	4.4	45	1.3	0.53	0.38
6	5.3	1.8	8.2	4.3	8.9	7.8	8.0	43	9.7	1.2	5.9	0.59
7	1.1	1.6	6.2	3.7	7.7	5.3	12	292	3.8	0.73	2.1	0.70
8	1.5	2.0	5.1	3.4	6.7	4.4	87	287	2.0	0.63	0.84	0.44
9	2.1	3.2	4.2	4.2	6.3	144	21	327	4.0	0.64	0.73	0.42
10	205	3.3	4.0	7.7	8.8	15	11	30	40	1.5	0.61	0.45
11	169	2.0	4.6	6.7	6.7	9.6	4.9	19	261	1.6	0.65	0.49
12	53	1.8	75	3.3	5.4	9.1	11	110	718	1.2	0.65	0.38
13	25	1.8	27	2.7	5.1	7.4	7.0	371	26	1.2	20	0.36
14	9.1	2.1	101	2.7	4.6	6.5	7.3	31	13	0.80	8.6	0.35
15	55	3.2	14	2.7	4.7	77	5.5	19	8.8	0.62	2.3	0.86
16	46	2.2	333	2.8	4.7	36	6.6	42	6.2	11	1.4	2.6
17	3.8	2.3	278	2.0	4.5	20	6.9	200	5.1	4.9	0.94	32
18	1.6	2.9	30	2.2	4.1	15	2.8	45	5.1	3.6	73	9.4
19	1.6	16	17	7.6	52	77	32	21	3.8	1.6	9.3	88
20	2.6	8.5	12	5.5	19	46	81	15	2.9	0.83	6.2	57
21	6.9	4.3	11	3.8	7.3	16	70	12	2.8	1.5	1.9	7.9
22	2.9	3.2	20	3.8	4.2	10	19	12	1.9	0.66	1.1	2.4
23	13	2.7	9.7	4.6	3.5	13	10	10	1.8	11	2.3	1.5
24	95	307	7.4	20	2.9	12	82	17	5.6	1.4	4.0	1.3
25	10	11	6.2	4.0	4.6	188	22	11	5.8	0.85	1.4	1.2
26	1.7	11	5.1	2.4	8.4	65	10	7.5	2.2	0.68	0.92	0.94
27	1.1	7.9	5.2	2.0	3.2	35	163	6.1	1.5	0.72	0.90	0.94
28	2.0	62	5.1	2.2	2.9	25	73	15	1.6	0.67	0.72	0.81
29	3.1	56	4.7	8.8	---	19	21	11	1.3	0.58	0.63	0.81
30	1.9	107	3.4	254	---	16	15	5.8	1.3	0.63	0.90	0.76
31	1.6	---	2.9	476	---	11	---	4.4	---	0.58	0.77	---
MEAN	25.5	21.9	33.5	27.6	10.8	34.2	27.6	64.6	39.8	2.80	4.89	7.17
MAX	205	307	333	476	57	188	163	371	718	26	73	88
MIN	0.33	1.6	2.9	2.0	2.9	2.6	2.8	4.4	1.3	0.58	0.51	0.35

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	11.1	11.4	12.4	22.2	30.6	31.8	22.5	32.2	33.1	14.7	11.4	7.19
MAX	25.5	21.9	33.5	47.2	64.3	78.5	35.3	64.6	67.2	39.4	19.2	9.39	
(WY)	2002	2002	2002	1999	1999	1998	1998	2002	1998	1998	1998	2001	
MIN	5.23	3.68	4.52	5.16	10.8	11.1	5.64	12.5	8.40	2.80	2.01	5.04	
(WY)	2000	2000	2001	2002	2002	2001	2000	1998	1999	2002	2001	1998	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1997 - 2002
ANNUAL MEAN	16.0	25.2	20.4
HIGHEST ANNUAL MEAN			28.4
LOWEST ANNUAL MEAN			11.4
HIGHEST DAILY MEAN	333	718	1150
LOWEST DAILY MEAN	0.21	0.33	0.21
ANNUAL SEVEN-DAY MINIMUM	0.47	0.41	0.26
MAXIMUM PEAK FLOW	---	3650 <sup>a</sup>	5100 <sup>a</sup>
MAXIMUM PEAK STAGE	---	11.76	14.95 <sup>b</sup>
INSTANTANEOUS LOW FLOW	---	0.20	0.01
10 PERCENT EXCEEDS	44	57	42
50 PERCENT EXCEEDS	3.2	5.1	3.8
90 PERCENT EXCEEDS	0.65	0.73	0.84

<sup>a</sup> From rating extended above 1,440 ft<sup>3</sup>/s.

<sup>b</sup> From crest-stage gage.

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- NESS CIFIC CON- DUCT- ANCE (μS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)
OCT 05...	0856	ENVIRONMENTAL	161	7.1	74	7.6	958	16.1	260	70.9	21.3	157
DEC 11...	0830	ENVIRONMENTAL	4.8	11.4	88	7.5	1290	4.1	390	108	28.9	236
FEB 05...	1010	ENVIRONMENTAL	9.7	11.6	84	7.7	1250	2.0	370	103	28.0	222
19...	1554	ENVIRONMENTAL	210	10.6	93	8.0	1030	8.4	300	79.0	24.0	182
MAY 29...	1225	ENVIRONMENTAL	9.7	5.8	65	7.8	922	20.0	300	87.0	21.0	198
AUG 09...	0820	ENVIRONMENTAL	.85	3.2	39	7.7	991	23.9	290	80.0	22.0	190

DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO- GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS- PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS- SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM- ICAL (high level) (mg/L) (00340)
OCT 05...	154	192	0	--	190	E1.1	.07	.150	<.01	.110	.28	8.0	45
DEC 11...	237	289	0	173	E4	E.30	.03	.150	<.01	.050	E.07	15	19
FEB 05...	224	273	0	170	11	.40	.01	1.20	<.01	.060	.07	9.2	11
19...	182	222	0	--	307	1.3	.21	.260	<.01	.050	.20	3.5	22
MAY 29...	199	243	0	--	38	.60	.10	.670	.03	.060	.12	5.5	18
AUG 09...	191	233	0	--	39	.70	.03	.030	<.01	.060	.13	7.3	13

DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)
OCT 05...	14000	29000	13800	54	2	<1	1.0	1.0	2.0	57	<1	84	<.1
DEC 11...	K37	K67	K30	16	<1	1	1.0	1.0	1.2	30	<1	114	<.1
FEB 05...	K27	K10	K97	14	<1	<1	<1.0	<1.0	<1.0	15	<1	176	<.1
19...	K670	K333	5800	164	<1	<1	<1.0	<1.0	1.4	118	<1	186	<.1
MAY 29...	3200	2900	4850	41	1	<1	<1.0	<1.0	1.5	43	<1	120	<.1
AUG 09...	K83	220	K88	<3	3	<1	<1.0	<1.0	1.5	3	<1	172	<.1

[illegible]

## MERAMEC RIVER BASIN

07019185 GRAND GLAIZE CREEK NEAR VALLEY PARK, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]



07019185 GRAND GLAIZE CREEK NEAR VALLEY PARK, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER (µg/L) (34694)
OCT 05...	M	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WATER WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 05...	<.06	M	<1	<2	<2	<2	<2	<2	<3	M
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--
19...	<.06	M	<1	<2	<2	<2	<2	<2	<1	<5
MAY 29...	--	--	--	--	--	--	--	--	--	--
AUG 09...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

07019195 YARNELL CREEK AT FENTON, MO

LOCATION.--Lat 38°31'38", long 90°26'50", St. Louis County, Hydrologic Unit 07140102, on right downstream abutment of Fabick Drive bridge, 0.9 mi north of Highway 30, 1.05 mi south of Interstate 44, and 1.09 mi upstream from confluence of Meramec River.

DRAINAGE AREA.--2.71 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1997 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage unknown.

REMARKS.--Records fair except estimated daily discharges and those below 1 ft<sup>3</sup>/s and above 400 ft<sup>3</sup>/s, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.15	0.14	1.0	0.35	6.9	0.63	e1.7	1.6	0.74	e0.41	0.23	0.18
2	0.14	1.8	0.34	0.35	2.1	14	e1.9	1.3	0.69	e0.38	0.23	0.17
3	0.16	0.27	0.30	0.34	1.6	2.7	e1.6	1.1	0.63	e0.41	0.25	0.29
4	0.13	0.32	0.26	0.35	1.0	1.0	e1.5	0.92	0.63	e0.42	0.26	0.23
5	8.5	0.23	0.25	0.34	0.76	e1.3	e1.5	0.92	4.5	e0.44	0.23	0.18
6	0.77	0.20	0.26	0.39	0.64	e1.1	e1.5	8.6	1.1	e0.42	1.1	0.17
7	0.23	0.19	0.24	0.35	0.58	e0.92	e1.9	46	0.69	e0.42	0.30	0.17
8	0.16	0.18	0.23	0.34	0.58	e0.80	e1.2	51	0.63	e0.40	0.22	0.16
9	0.21	0.25	0.23	0.34	0.50	e2.3	2.1	61	1.5	e0.42	0.20	0.21
10	19	0.25	0.21	0.34	0.70	e1.7	1.3	4.4	1.3	e0.50	0.20	0.17
11	26	0.18	0.19	0.34	0.60	e1.6	1.1	e3.1	e30	e0.82	0.46	0.16
12	5.3	0.18	11	0.34	0.50	e1.5	1.3	e2.6	e4.3	0.42	0.25	0.20
13	3.3	0.18	2.5	0.31	0.47	e1.2	1.2	e4.6	e0.74	0.37	1.3	0.16
14	1.1	0.18	13	0.28	0.45	e0.99	1.5	e3.2	e0.91	0.34	1.2	0.16
15	9.4	0.18	2.1	0.26	0.45	e1.6	0.99	e3.5	e0.83	0.30	0.34	0.25
16	4.1	0.19	51	0.26	0.45	e3.0	0.81	e9.4	e0.74	0.30	0.48	0.20
17	0.42	0.20	37	0.26	0.45	e1.9	0.76	e4.6	e0.71	0.30	0.87	5.0
18	0.26	0.21	3.2	0.26	0.45	e1.4	0.95	e6.6	e0.70	0.27	14	0.76
19	0.20	0.26	1.7	0.86	8.0	e1.2	7.0	e3.8	e0.63	0.30	0.72	3.0
20	0.16	0.23	1.1	0.71	1.9	e3.6	6.5	e3.0	e0.59	0.28	0.34	8.8
21	0.15	0.23	0.85	0.66	0.89	e2.0	13	e2.1	e0.57	0.30	0.27	0.53
22	0.15	0.23	1.7	0.57	0.63	e1.6	2.4	1.3	e0.53	3.0	0.25	0.21
23	2.0	0.28	1.00	1.3	0.59	e1.4	1.4	1.2	e0.50	1.9	0.25	0.18
24	7.5	44	0.71	2.0	0.53	e2.0	14	2.0	e0.52	0.34	0.26	0.18
25	0.97	0.79	0.60	0.55	0.79	e1.9	2.3	1.4	e1.7	0.25	0.23	0.17
26	0.45	0.80	0.53	0.39	1.1	e6.1	1.3	0.90	e0.49	0.20	0.23	0.18
27	0.28	0.54	0.50	0.34	0.82	e2.5	39	0.84	e0.48	0.20	0.23	0.61
28	0.23	7.6	0.56	0.30	0.70	e2.0	17	2.9	e0.47	0.21	0.24	0.21
29	0.17	5.8	0.48	0.85	---	e2.4	2.5	1.4	e0.45	0.21	0.22	0.15
30	0.16	11	0.42	33	---	e1.9	1.8	0.83	e0.43	0.23	0.23	0.15
31	0.14	---	0.37	65	---	e1.8	---	0.76	---	0.23	0.18	---
MEAN	2.96	2.57	4.32	3.62	1.26	4.29	4.79	11.1	3.25	0.48	0.83	0.77
MAX	26	44	51	65	8.0	23	39	61	43	3.0	14	8.8
MIN	0.13	0.14	0.19	0.26	0.45	0.63	0.76	0.76	0.43	0.20	0.18	0.15

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	1997	1998	1999	2000	2001	2002
MEAN	1.86	1.80	1.69	3.08	4.36	4.46
MAX	2.96	2.57	4.32	6.59	9.37	11.8
(WY)	2002	2002	2002	1999	1999	1998
MIN	1.37	0.40	0.44	0.77	1.25	1.18
(WY)	2000	2000	1999	2000	2002	2000

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1997 - 2002

	2001	2002	1997-2002
ANNUAL MEAN	2.38	3.37	3.15
HIGHEST ANNUAL MEAN			4.64
LOWEST ANNUAL MEAN			1.88
HIGHEST DAILY MEAN	51	Dec 16	165
LOWEST DAILY MEAN	0.13	Oct 4	0.13
ANNUAL SEVEN-DAY MINIMUM	0.15	Sep 28	0.15
MAXIMUM PEAK FLOW	---		803 <sup>a</sup>
MAXIMUM PEAK STAGE	---		7.54
INSTANTANEOUS LOW FLOW	---		0.13
10 PERCENT EXCEEDS	5.5		7.5
50 PERCENT EXCEEDS	0.51		0.60
90 PERCENT EXCEEDS	0.20		0.19

e Estimated

<sup>a</sup> From rating extended above 123 ft<sup>3</sup>/s.

## 07019220 FENTON CREEK NEAR FENTON, MO

LOCATION.--Lat 38°30'41", long 90°26'41", St. Louis County, Hydrologic Unit 07140102, on left bank 100 ft downstream of Highway 141 bridge, 0.66 mi north of county line, 0.24 mi south of Highway 30, and 1.4 mi upstream from confluence of Meramec River.

DRAINAGE AREA.--4.29 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--June 1997 to current year.

GAGE.--Water-stage recorder. Datum of gage is 416.09 ft above National Geodetic Vertical Datum of 1929. Prior to May 1, 2001, gage was located on left downstream abutment of Highway 141 bridge, 100 ft upstream at same datum.

REMARKS.--Water-discharge records fair.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.30	0.46	1.5	0.82	8.4	0.81	2.5	3.6	1.1	0.51	0.36	0.40
2	0.33	2.1	0.94	0.78	2.8	21	2.8	3.3	1.1	0.48	0.37	0.39
3	0.33	0.49	0.85	0.75	2.0	3.2	2.3	2.6	1.1	0.50	0.35	0.41
4	0.36	0.43	0.75	0.71	1.4	1.6	2.2	2.3	8.5	0.50	0.33	0.40
5	5.9	0.43	0.71	0.71	1.1	1.8	2.2	2.3	1.5	0.51	0.36	0.40
6	0.63	0.43	0.77	0.80	1.1	1.5	2.2	18	1.1	0.51	0.81	0.39
7	0.38	0.43	0.64	0.72	0.99	1.2	3.0	62	0.91	0.50	0.38	0.38
8	0.37	0.46	0.59	0.70	0.86	1.2	20	77	0.93	0.49	0.35	0.37
9	0.38	0.48	0.53	0.63	0.80	37	3.9	83	1.8	0.52	0.34	0.37
10	15	0.49	0.55	0.70	0.93	3.1	2.8	6.0	3.4	0.56	0.34	0.61
11	27	0.48	0.60	0.64	0.74	2.4	2.6	4.3	40	0.95	1.4	0.59
12	4.6	0.49	14	0.61	0.71	2.1	5.1	34	56	0.76	0.41	0.31
13	4.2	0.50	3.5	0.60	0.67	1.6	2.4	58	3.4	0.68	1.6	0.31
14	0.98	0.48	24	0.59	0.66	1.5	2.5	5.2	1.2	0.49	0.72	0.49
15	12	0.48	4.7	0.56	0.67	26	2.1	3.7	1.0	0.49	0.50	0.33
16	4.0	0.50	84	0.55	0.64	5.4	2.0	13	0.94	0.45	0.44	0.31
17	1.0	0.41	59	0.55	0.61	2.9	2.0	58	0.89	0.44	0.43	3.8
18	0.49	0.41	4.9	0.60	0.62	2.2	1.9	8.3	0.88	0.42	13	0.65
19	0.51	0.40	2.7	1.1	13	20	14	3.7	0.83	0.43	1.3	1.4
20	0.43	0.37	1.9	0.74	2.5	6.4	12	2.8	0.76	0.41	0.68	7.4
21	0.41	0.37	1.5	0.92	1.2	3.1	48	2.4	0.73	0.40	0.52	0.60
22	0.43	0.37	2.1	0.76	0.94	2.4	12	2.1	0.69	4.6	0.47	0.47
23	1.4	0.43	1.5	1.7	0.90	2.1	7.0	1.7	0.65	0.94	0.55	0.43
24	9.2	50	1.2	2.2	0.92	3.2	17	2.1	0.68	0.48	0.47	0.43
25	0.99	1.2	1.1	0.93	1.3	35	6.8	1.8	2.1	0.44	0.44	0.39
26	0.46	0.98	1.0	0.84	1.0	12	5.7	1.5	0.72	0.42	0.44	0.37
27	0.41	0.75	1.0	0.78	0.88	4.3	95	1.5	0.62	0.40	0.42	0.37
28	0.37	9.1	0.96	0.77	0.84	3.2	22	6.7	0.58	0.38	0.40	0.37
29	0.38	10	0.86	1.2	---	3.7	4.7	1.7	0.56	0.37	0.39	0.31
30	0.39	17	0.80	44	---	2.9	3.4	1.4	0.53	0.36	0.39	0.34
31	0.43	---	0.84	88	---	2.7	---	1.2	---	0.36	0.40	---
MEAN	3.03	3.36	7.10	5.03	1.76	7.02	10.4	15.3	4.51	0.64	0.95	0.79
MAX	27	50	84	88	13	37	95	83	56	4.6	13	7.4
MIN	0.30	0.37	0.53	0.55	0.61	0.81	1.9	1.2	0.53	0.36	0.33	0.31

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1997 - 2002, BY WATER YEAR (WY)

	MEAN	2.15	2.40	2.59	5.04	6.36	6.89	5.84	6.82	7.55	3.32	2.55	1.06
MAX	3.04	3.36	7.09	12.7	12.6	18.1	10.5	16.1	14.3	8.12	4.80	1.95	
(WY)	2002	2002	2002	1999	1999	1998	2002	2002	1998	1998	2000	2000	
MIN	1.08	0.91	0.37	1.22	1.76	1.69	1.23	1.87	2.83	0.64	0.82	0.26	
(WY)	1998	2000	1999	2000	2002	2000	2000	1998	2001	2002	2001	1999	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1997 - 2002	
ANNUAL MEAN	3.16		5.02		4.14	
HIGHEST ANNUAL MEAN					6.07	
LOWEST ANNUAL MEAN					2.51	
HIGHEST DAILY MEAN	84	Dec 16	95	Apr 27	171	Feb 7 1999
LOWEST DAILY MEAN	0.19	Sep 15,16	0.30	Oct 1	0.13	Sep 27 1999
ANNUAL SEVEN-DAY MINIMUM	0.23	Sep 22	0.36	Jul 30	0.17	Sep 21 1999
MAXIMUM PEAK FLOW	---		1130 <sup>a</sup>	May 9	1260 <sup>b</sup>	Jun 11 1998
MAXIMUM PEAK STAGE	---		5.26	May 9	9.71	Jun 11 1998
INSTANTANEOUS LOW FLOW	---		0.26	Oct 1	0.07	Sep 22 1999
10 PERCENT EXCEEDS	7.3		12		7.9	
50 PERCENT EXCEEDS	0.71		0.88		0.69	
90 PERCENT EXCEEDS	0.32		0.38		0.27	

<sup>a</sup> From rating extended above 150 ft<sup>3</sup>/s.

<sup>b</sup> From rating extended above 325 ft<sup>3</sup>/s.

## MERAMEC RIVER BASIN

07019220 FENTON CREEK NEAR FENTON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1997 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	
DATE	TIME	SAMPLE TYPE											
OCT 15...	2030	ENVIRONMENTAL	92	8.4	80	6.7	340	12.2	140	40.0	9.00	85	
DEC 11...	1405	ENVIRONMENTAL	.59	11.1	96	7.4	1240	8.4	550	150	41.5	235	
FEB 05...	0742	ENVIRONMENTAL	1.1	10.9	83	7.3	1380	3.9	530	143	42.0	234	
19...	1522	ENVIRONMENTAL	97	9.9	91	7.7	456	9.9	150	39.0	12.0	110	
19...	1530	BLANK	--	--	--	--	--	--	--	.28	.04	--	
MAY 29...	1530	ENVIRONMENTAL	1.54	8.6	98	7.7	679	21.2	500	137	38.0	226	
AUG 06...	0810	ENVIRONMENTAL	2.32	4.7	57	7.6	711	24.8	220	62.0	16.0	136	
DATE	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDE (mg/L) (00530)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO-GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS-PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS-SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM-ICAL (high level) (mg/L) (00340)
OCT 15...	88	108	0	--	336	<.20	.03	.520	.01	.180	.30	30	21
DEC 11...	239	292	0	82.8	<1	E.30	.12	4.70	.01	.030	E.05	17	13
FEB 05...	238	290	0	110	10	.40	<.01	4.70	<.01	.040	.04	23	8
19...	110	134	0	--	336	1.3	.05	.480	.02	.060	.26	4.0	25
19...	--	--	--	--	16	<.20	<.01	<.020	<.01	.010	<.02	--	<5
MAY 29...	226	276	0	--	10	.30	.04	4.50	.02	.020	.03	7.9	11
AUG 06...	135	164	0	--	20	2.0	<.01	1.80	.08	.020	.15	7.2	90
DATE	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	BERYL-LIUM, DIS-SOLVED (µg/L as Be) (01010)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CHRO-MIUM, DIS-SOLVED (µg/L as Cr) (01030)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)	IRON, DIS-SOLVED (µg/L as Fe) (01046)	LEAD, DIS-SOLVED (µg/L as Pb) (01049)	MANGA-NESE, DIS-SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV-ERABLE (µg/L as Hg) (71900)
OCT 15...	K5600	K41000	K8400	350	1	<1	<1.0	1.1	2.7	365	1	108	<.1
DEC 11...	K50	K100	K33	3	<1	1	1.0	1.0	1.0	7	<1	85	<.1
FEB 05...	420	1500	100	17	<1	<1	<1.0	<1.0	<1.0	9	<1	107	<.1
19...	K1200	K1500	29000	1210	<1	<1	<1.0	1.1	1.8	761	<1	103	<.1
19...	--	--	--	<3	<1	<1	<1.0	<1.0	<1.0	<2	<1	<1	<.1
MAY 29...	390	K300	385	14	<1	<1	<1.0	<1.0	1.2	17	<1	55	<.1
AUG 06...	K16000	K12000	K46400	16	2	<1	<1.0	1.1	4.7	31	<1	108	<.1



## MERAMEC RIVER BASIN

07019220 FENTON CREEK NEAR FENTON, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	FLUOR- ANTHENE TOTAL (µg/L) (34376)	FLUOR- ENE TOTAL (µg/L) (34381)	FONOFOS (DY- FONATE) WATER WHOLE TOT.REC (µg/L) (82614)	HEPTA- CHLOR- EPOXIDE TOTAL (µg/L) (39420)	HEPTA- CHLOR, TOTAL (µg/L) (39410)	HEXA- CHLORO- BENZENE TOTAL (µg/L) (39700)	INDENO (1,2,3- CD) PYRENE TOTAL (µg/L) (34403)	ISO- PHORONE TOTAL (µg/L) (34408)	LINDANE TOTAL (µg/L) (39340)	MALA- THION, TOTAL (µg/L) (39530)	METH- OXY- CHLOR, TOTAL (µg/L) (39480)	METHYL PARA- THION, TOTAL (µg/L) (39600)	MIREX, TOTAL (µg/L) (39755)
OCT 15...	M	M	<.01	<.009	<.01	<2	M	M	<.006	E.05	<.020	<.01	<.006
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	M	M	<.01	<.009	<.01	<2	M	M	<.006	<.30	<.020	<.02	<.006
19...	<2	<2	<.01	<.009	<.01	<2	<3	<2	<.006	<.30	<.020	<.02	<.006
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	N-BUTYL BENZYL PHTHAL- ATE TOTAL (µg/L) (34292)	N-NITRO -SODI- METHYL- AMINE TOTAL (µg/L) (34438)	N- NITRO- SODI-N- PROPYL- AMINE TOTAL (µg/L) (34428)	N-NITRO -SODI- PHENYL- AMINE TOTAL (µg/L) (34433)	P,P'- DDD UNFILT RECOVER (µg/L) (39360)	P,P'- DDE, TOTAL (µg/L) (39365)	P,P'- DDT UNFILT RECOVER (µg/L) (39370)	PARA- CHLORO- META CRESOL TOTAL (µg/L) (34452)	PARA- THION, TOTAL (µg/L) (39540)	PCB, TOTAL (µg/L) (39516)	PENTA- CHLORO- PHENOL TOTAL (µg/L) (39032)	PHENAN- THRENE TOTAL (µg/L) (34461)	PHENOL UNFILT. WATER (µg/L) (34694)
OCT 15...	M	<3	<2	<3	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
DEC 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
19...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	M	M	<3.0
19...	<4	<3	<2	<2	<.007	<.006	<.009	<3	<.01	<.1	<4	<2	<3.0
MAY 29...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 15...	<.06	M	<1	<2	<2	<2	<2	<2	<3	M
DEC 11...	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--
19...	<.06	M	<1	<2	<2	<2	<2	<2	<1	M
19...	<.06	<2	<1	<2	<2	<2	<2	<2	<1	<5
MAY 29...	--	--	--	--	--	--	--	--	--	--
AUG 06...	--	--	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## MERAMEC RIVER BASIN

353

07019280 MERAMEC RIVER AT PAULINA HILLS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 38°27'46", long 90°24'53", Jefferson County, Hydrologic Unit 07140102, at bridge on State Highway 21 at Paulina Hills, 0.3 mi downstream from Saline Creek, and 10 mi upstream from mouth of Meramec River.

DRAINAGE AREA.--3,920 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1963 to July 1975, October 1981 to current year. August 1963 to September 1970 published as Meramec River at Paulina Hills (07019045).

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)		
OCT 16...	0740	ENVIRONMENTAL	846	5.8	57	7.7	440	14.5	--	--	--	--		
16...	0741	REPLICATE	--	--	--	--	--	--	--	--	--	--		
NOV 14...	1520	ENVIRONMENTAL	744	11.0	109	8.1	454	14.1	210	43.8	25.3	1.45		
DEC 11...	1450	ENVIRONMENTAL	1210	6.6	57	7.5	382	8.4	--	--	--	--		
JAN 15...	1430	ENVIRONMENTAL	1070	12.6	103	7.8	411	6.4	200	42.2	22.4	1.00		
FEB 12...	0845	ENVIRONMENTAL	2380	11.0	89	7.9	315	6.3	--	--	--	--		
MAR 12...	1535	ENVIRONMENTAL	7460	9.8	85	7.6	228	8.6	--	--	--	--		
APR 03...	1215	ENVIRONMENTAL	3680	8.0	75	8.0	319	11.7	--	--	--	--		
MAY 28...	1100	ENVIRONMENTAL	4410	5.3	59	7.7	289	19.9	140	31.8	15.3	1.25		
JUN 04...	0800	ENVIRONMENTAL	2580	6.9	86	8.0	318	25.8	--	--	--	--		
04...	0801	REPLICATE	--	--	--	--	--	--	--	--	--	--		
JUL 10...	1430	ENVIRONMENTAL	1260	6.4	88	8.0	384	31.2	190	41.4	21.3	2.15		
AUG 14...	1145	ENVIRONMENTAL	2860	5.7	73	7.8	448	27.2	--	--	--	--		
SEP 04...	1430	ENVIRONMENTAL	1020	5.3	70	8.5	347	29.5	--	--	--	--		
DATE		SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 16...	--	159	160	194	0	--	--	--	--	51	--	.10	.63	.47
16...	--	--	--	--	--	--	--	--	--	49	--	.12	.65	.48
NOV 14...	15.3	182	184	225	0	20.3	.2	29.0	24	260	.21	.68	.31	
DEC 11...	--	223	230	281	0	--	--	--	<10	--	.21	.50	.37	
JAN 15...	9.32	169	170	207	0	14.7	.1	25.0	14	230	<.04	.59	.54	
FEB 12...	--	126	126	153	0	--	--	--	10	--	E.14	.41	E.65	
MAR 12...	--	97	96	118	0	--	--	--	56	--	<.04	.60	.28	
APR 03...	--	129	130	159	0	--	--	--	38	--	.07	.39	.40	
MAY 28...	4.85	128	128	156	0	6.97	.2	15.0	20	172	<.04	.33	.55	
JUN 04...	--	138	139	170	0	--	--	--	38	--	<.04	.45	.06	
04...	--	--	--	--	--	--	--	--	44	--	<.04	.41	.06	
JUL 10...	8.69	167	168	205	0	12.6	E.1	19.1	68	216	<.04	.63	.12	
AUG 14...	--	178	181	221	0	--	--	--	<10	--	.09	.69	.25	
SEP 04...	--	174	172	194	8	--	--	--	46	--	<.04	.58	.08	

## MERAMEC RIVER BASIN

07019280 MERAMEC RIVER AT PAULINA HILLS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT													
16...	.052	.12	.10	.18	92	88	115	--	--	--	--	--	--
16...	.054	.13	.10	.18	--	--	--	--	--	--	--	--	--
NOV													
14...	.028	.09	.07	.14	98	144	K17	31	326	.7	E.03	<.1	<6
DEC													
11...	.044	.07	.06	.10	K460	K300	49	--	--	--	--	--	--
JAN													
15...	.017	E.04	.03	.08	K4	K20	K22	11	124	.4	E.02	<.1	<6
FEB													
12...	E.008	<.06	E.04	E.06	48	145	58	--	--	--	--	--	--
MAR													
12...	.014	E.04	.02	.11	290	K413	420	--	--	--	--	--	--
APR													
03...	.012	E.03	E.01	.08	<2	K7	K9	--	--	--	--	--	--
MAY													
28...	.016	E.03	E.01	.07	K33	100	56	43	322	.5	E.03	<.1	<6
JUN													
04...	.018	<.06	<.02	.07	K31	K26	K33	--	--	--	--	--	--
04...	.016	<.06	<.02	E.05	K26	K20	K33	--	--	--	--	--	--
JUL													
10...	.015	E.04	.03	.11	K14	84	K4	4	399	1.3	<.04	E.1	<6
AUG													
14...	.028	.07	.06	.14	K27	62	48	--	--	--	--	--	--
SEP													
04...	.019	E.04	.02	.12	21	K24	K8	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
------	---	---	--	---	--	--	---	--

OCT								
16...	--	--	--	--	--	--	--	--
16...	--	--	--	--	--	--	--	--
NOV								
14...	30	.63	8	34.0	<.01	E.2	15	16
DEC								
11...	--	--	--	--	--	--	--	--
JAN								
15...	19	.28	6	63.8	<.01	.4	10	9
FEB								
12...	--	--	--	--	--	--	--	--
MAR								
12...	--	--	--	--	--	--	--	--
APR								
03...	--	--	--	--	--	--	--	--
MAY								
28...	72	1.52	13	56.6	<.01	E.3	--	8
JUN								
04...	--	--	--	--	--	--	--	--
04...	--	--	--	--	--	--	--	--
JUL								
10...	<10	.61	20	47.4	<.01	E.2	2	9
AUG								
14...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.



07019317 MATTESE CREEK NEAR MATTESE, MO

LOCATION.--Lat 38°28'59", long 90°20'27", in SW ¼ NW ¼ NW ¼ sec.10, T.43 N., R.6 E., St. Louis County, Hydrologic Unit 07140102, on right downstream pier of Ringer Road bridge, 0.86 mi east of Interstate 55, 1.4 mi south of Interstate 255, and 3.4 mi above confluence to Meramec River.

DRAINAGE AREA.--7.88 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 1996 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 413.57 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	3.0	e0.60	15	0.90	2.9	6.5	1.1	0.00	0.00	0.00
2	0.00	12	2.4	e0.55	5.0	e25	3.9	6.8	0.99	0.00	0.00	0.00
3	0.00	0.62	1.9	e0.48	3.6	e7.0	2.5	5.1	0.87	2.0	0.00	0.00
4	0.00	0.11	1.6	e0.40	2.9	e2.8	2.4	4.7	0.70	0.12	0.00	0.00
5	24	0.00	2.0	e0.37	2.7	2.4	2.0	4.2	1.1	0.00	0.00	0.00
6	2.9	0.00	1.8	e0.70	2.6	2.2	1.8	28	0.89	0.00	14	0.00
7	0.02	0.00	0.79	e0.46	1.8	1.6	3.7	66	0.49	0.00	0.26	0.00
8	0.00	0.00	0.49	0.25	1.4	1.6	29	89	0.44	0.00	0.00	0.00
9	0.00	0.00	0.18	0.26	1.3	64	5.9	108	0.34	0.00	0.14	0.00
10	17	0.00	0.14	0.29	1.8	4.8	3.0	11	22	0.20	0.00	0.00
11	87	0.00	0.09	0.20	1.2	3.4	2.6	7.4	124	0.02	45	0.00
12	15	0.00	36	0.17	0.96	3.1	4.8	41	150	0.71	1.3	0.00
13	13	0.00	13	0.12	0.82	2.3	2.6	57	4.5	0.00	2.4	0.00
14	2.8	0.00	63	0.11	0.68	1.9	3.9	9.4	1.2	0.00	1.9	33
15	27	0.00	13	0.07	0.73	61	2.0	6.2	0.54	0.01	0.76	2.0
16	12	0.00	105	0.14	0.66	11	1.5	14	0.28	0.00	0.49	0.00
17	1.7	0.00	79	0.15	0.41	5.2	2.1	50	0.13	0.00	0.00	19
18	1.2	0.00	6.5	0.05	0.37	3.7	1.2	12	0.08	0.03	22	3.2
19	1.0	0.00	4.2	e4.6	21	28	11	6.2	0.05	0.00	13	17
20	0.47	0.00	2.9	1.0	4.1	9.9	11	4.7	0.02	0.00	3.5	19
21	0.08	0.00	2.4	0.56	1.7	4.8	22	3.7	0.00	0.00	0.38	2.4
22	0.00	0.00	2.8	e0.60	1.3	3.7	4.5	3.1	0.00	28	0.04	0.74
23	5.8	0.00	1.8	5.3	1.0	3.3	2.8	2.8	0.00	3.5	0.68	0.04
24	35	98	1.4	5.4	1.0	4.2	12	4.4	0.00	0.00	0.07	0.00
25	3.1	2.7	1.1	0.93	3.8	e50	3.7	3.0	10	0.00	0.00	0.73
26	1.2	1.6	1.0	0.75	e3.5	24	2.2	2.0	1.1	0.00	0.00	0.10
27	0.63	1.1	0.97	0.64	1.6	6.6	92	6.2	0.00	0.00	0.00	0.00
28	0.25	23	0.91	0.51	0.98	5.0	27	27	0.00	0.00	0.00	0.00
29	0.06	30	0.75	0.69	---	8.5	9.4	4.0	0.00	0.00	0.00	0.00
30	0.10	39	e0.70	55	---	3.8	7.3	2.0	0.00	0.00	0.00	0.00
31	0.00	---	e0.66	118	---	3.1	---	1.5	---	0.00	0.00	---
MEAN	8.11	6.94	11.3	6.43	3.00	11.6	9.42	19.2	10.7	1.12	3.42	3.24
MAX	87	98	105	118	21	64	92	108	150	28	45	33
MIN	0.00	0.00	0.09	0.05	0.37	0.90	1.2	1.5	0.00	0.00	0.00	0.00
IN.	1.19	0.98	1.66	0.94	0.40	1.69	1.33	2.82	1.51	0.16	0.50	0.46

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1996 - 2002, BY WATER YEAR (WY)

	1996	1997	1998	1999	2000	2001	2002
MEAN	3.50	6.82	4.08	7.92	11.4	11.5	8.62
MAX	8.11	19.7	11.3	16.0	23.9	31.9	19.6
(WY)	2002	1997	2002	1997	1997	1998	2002
MIN	1.58	0.96	0.66	1.05	3.00	2.63	2.33
(WY)	2000	2000	1999	2001	2002	2001	2000

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1996 - 2002

ANNUAL MEAN	6.25	7.92	8.15
HIGHEST ANNUAL MEAN			12.0
LOWEST ANNUAL MEAN			4.85
HIGHEST DAILY MEAN	379	Jul 24	512
LOWEST DAILY MEAN	0.00	Many Days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	At Times	0.00
MAXIMUM PEAK FLOW	---		3310 <sup>a</sup>
MAXIMUM PEAK STAGE	---	10.09	12.82
INSTANTANEOUS LOW FLOW	---	0.00	0.00
ANNUAL RUNOFF (INCHES)	10.76	13.65	14.05
10 PERCENT EXCEEDS	13	22	17
50 PERCENT EXCEEDS	0.56	1.1	0.84
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

<sup>a</sup> From rating extended above 571 ft<sup>3</sup>/s.

## MERAMEC RIVER BAIN

07019317 MATTESE CREEK NEAR MATTESE, MO--Continued  
(Metropolitan Sewer District)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1996 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)			
DATE	TIME	SAMPLE TYPE													
OCT 15...	1943	ENVIRONMENTAL	121	8.7	84	6.9	655	13.2	210	63.0	12.0	111			
DEC 10...	1405	ENVIRONMENTAL	.14	11.1	95	7.6	1170	7.5	390	119	23.1	244			
FEB 04...	1532	ENVIRONMENTAL	2.9	13.8	111	7.2	1200	5.8	380	116	23.0	251			
MAR 09...	0226	ENVIRONMENTAL	107	9.5	94	7.7	2050	13.5	140	43.0	7.60	93			
MAY 28...	1240	ENVIRONMENTAL	2.0	10.8	123	7.8	848	20.5	300	93.0	17.0	218			
AUG 05...	1030	ENVIRONMENTAL	e.01	6.7	89	8.1	508	29.6	260	79.0	16.0	188			
05...	1031	BLANK	--	--	--	--	--	--	--	<.02	<.03	--			
			ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	NITRO-GEN,AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, AMMONIA TOTAL (mg/L as N) (00610)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> TOTAL (mg/L as N) (00630)	NITRO-GEN, NITRITE TOTAL (mg/L as N) (00615)	PHOS-PHORUS ORTHO TOTAL (mg/L as P) (70507)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	CARBON DIOXIDE DIS-SOLVED (mg/L as CO <sub>2</sub> ) (00405)	OXYGEN DEMAND, CHEM-ICAL (high level) (mg/L) (00340)
OCT 15...	112	136	0	--	121	<.20	.01	.690	.01	.110	.22	26	23		
DEC 10...	252	308	0	160	<1	E.40	.04	.560	<.01	.050	E.06	11	16		
FEB 04...	255	311	0	170	<1	.20	<.01	1.00	<.01	.050	.05	28	13		
MAR 09...	90	110	0	--	803	3.3	.13	.420	.02	.110	.72	3.8	44		
MAY 28...	219	267	0	--	5	.20	.05	.730	.02	.050	.05	6.4	16		
AUG 05...	188	230	0	--	<1	.40	.02	.050	<.01	.070	.08	3.1	14		
05...	--	--	--	--	<1	<.20	<.01	<.020	<.01	<.010	<.02	--	8		
			E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STREP, MF, WATER (col./ 100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	BERYL-LIUM, DIS-SOLVED (µg/L as Be) (01010)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CHRO-MIUM, DIS-SOLVED (µg/L as Cr) (01030)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)	IRON, DIS-SOLVED (µg/L as Fe) (01046)	LEAD, DIS-SOLVED (µg/L as Pb) (01049)	MANGA-NESE, DIS-SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV-ERABLE (µg/L as Hg) (71900)
OCT 15...	K2700	K5600	K44000	151	1	<1	<1.0	<1.0	2.6	164	<1	55	<.1		
DEC 10...	K150	230	K92	9	<1	1	1.0	1.0	1.3	29	<1	21	<.1		
FEB 04...	K15	285	153	8	<1	<1	<1.0	<1.0	1.2	25	<1	47	<.1		
MAR 09...	K200	5400	7000	401	2	<1	<1.0	3.2	3.3	244	1	82	<.1		
MAY 28...	720	1140	1000	37	<1	<1	<1.0	<1.0	1.6	33	<1	26	<.1		
AUG 05...	680	1000	104	<3	2	<1	<1.0	<1.0	1.7	5	<1	209	<.1		
05...	--	--	--	<3	<1	<1	<1.0	<1.0	<1.0	2	<1	<1	<.1		

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07019317 MATTESE CREEK NEAR MATTESE, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible][illegible]

07019317 MATTESE CREEK NEAR MATTESE, MO--Continued  
(Metropolitan Sewer District)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PHORATE TOTAL (µg/L) (39023)	PYRENE TOTAL (µg/L) (34469)	TOX- APHENE, TOTAL (µg/L) (39400)	BENZENE 1,2,4- TRI- CHLORO- WAT UNF REC (µg/L) (34551)	BENZENE 1,3-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34566)	BENZENE 1,4-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34571)	BENZENE O-DI- CHLORO- WATER UNFLTRD REC (µg/L) (34536)	ETHANE HEXA- CHLORO- WATER UNFLTRD RECOVER (µg/L) (34396)	HEXA- CHLORO- BUT- ADIENE TOTAL (µg/L) (39702)	NAPHTH- ALENE TOTAL (µg/L) (34696)
OCT 15...	<.06	M	<1	<2	<2	<2	<2	<2	<3	<5
DEC 10...	--	--	--	--	--	--	--	--	--	--
FEB 04...	--	--	--	--	--	--	--	--	--	--
MAR 09...	<.02	4	<1	<2	<2	<2	<2	<2	<1	M
MAY 28...	--	--	--	--	--	--	--	--	--	--
AUG 05...	--	--	--	--	--	--	--	--	--	--
05...	--	--	--	--	--	--	--	--	--	--

e--Estimated discharge value.

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL

LOCATION.--Lat 37°54'10", long 89°50'10", in SW ¼ sec.24, T.7 S., R.7 W., third principal meridian, Randolph County, Hydrologic Unit 07140105, on downstream side of left pier of main truss of highway bridge at Chester, 8.1 mi downstream from Kaskaskia River, and at mile 109.9 above Ohio River.

DRAINAGE AREA.--708,600 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

## PERIOD OF RECORD.--

DISCHARGE: October 1927 to current year. Monthly discharge only for some periods, published in WSP 1311. Since August 1873, results of discharge measurements in reports of the Mississippi River Commission.

GAGE HEIGHT: July 1942 to current year. Since May 1891, in reports of the Mississippi River Commission and National Weather Service.

REVISED RECORDS.--WDR MO-76-1: Drainage area. WDR MO-98-1: Extreme outside period of record.

GAGE.--Water-stage recorder. Datum of gage is 341.05 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 1, 1962, nonrecording gage 0.4 mi downstream at present datum.

REMARKS.--Water-discharge records good. Natural flow of stream affected by many reservoirs and navigation dams in upper Mississippi River Basin and by many reservoirs and diversions for irrigation in Missouri River Basin. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 30, 1844, reached a gage height of 39.8 ft, discharge, 1,050,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	134000	143000	149000	95000	193000	154000	177000	413000	391000	235000	147000	181000
2	127000	137000	149000	94400	270000	159000	164000	418000	356000	226000	143000	172000
3	118000	135000	149000	88900	271000	164000	161000	411000	338000	221000	135000	163000
4	106000	136000	150000	86500	244000	166000	164000	399000	332000	218000	128000	155000
5	99400	137000	151000	86400	210000	159000	165000	387000	324000	214000	127000	145000
6	104000	139000	148000	91500	188000	142000	165000	370000	313000	210000	124000	134000
7	103000	138000	140000	93500	171000	130000	166000	370000	312000	206000	124000	127000
8	107000	133000	132000	92500	159000	137000	173000	417000	323000	202000	123000	123000
9	112000	125000	128000	93700	147000	157000	182000	495000	332000	196000	122000	121000
10	115000	126000	125000	102000	143000	180000	199000	554000	343000	192000	116000	122000
11	113000	128000	128000	104000	144000	188000	223000	592000	354000	190000	117000	120000
12	116000	125000	135000	100000	141000	199000	231000	616000	378000	189000	118000	119000
13	132000	121000	144000	103000	140000	195000	226000	655000	399000	192000	117000	124000
14	139000	118000	147000	104000	139000	186000	222000	678000	424000	192000	123000	125000
15	141000	114000	155000	105000	143000	183000	221000	698000	445000	186000	130000	125000
16	139000	111000	162000	101000	144000	191000	211000	715000	450000	178000	134000	125000
17	139000	110000	199000	96800	139000	194000	209000	732000	443000	165000	134000	123000
18	140000	108000	223000	98100	132000	190000	213000	732000	428000	156000	138000	126000
19	147000	104000	218000	93500	132000	190000	215000	716000	408000	155000	134000	124000
20	151000	104000	205000	94200	134000	200000	221000	693000	382000	152000	137000	127000
21	157000	102000	190000	93100	131000	196000	238000	659000	351000	152000	155000	130000
22	153000	103000	175000	89900	129000	192000	277000	616000	320000	159000	158000	124000
23	138000	99200	173000	85100	142000	189000	313000	570000	299000	159000	156000	114000
24	147000	96300	169000	85000	153000	181000	316000	524000	280000	158000	160000	112000
25	168000	112000	153000	91400	163000	190000	322000	482000	268000	157000	199000	113000
26	179000	123000	133000	89500	170000	205000	327000	453000	264000	154000	217000	108000
27	167000	118000	129000	87000	162000	198000	324000	439000	256000	150000	214000	102000
28	154000	118000	118000	87100	152000	191000	329000	440000	249000	146000	207000	94600
29	157000	121000	99400	88000	---	192000	356000	449000	242000	144000	196000	89700
30	150000	136000	90300	94600	---	196000	392000	442000	240000	141000	189000	92800
31	145000	---	86900	110000	---	188000	---	422000	---	147000	187000	---
MEAN	135400	120700	150100	94350	163800	180100	236700	534100	341500	178800	148700	125400
MAX	179000	143000	223000	110000	271000	205000	392000	732000	450000	235000	217000	181000
MIN	99400	96300	86900	85000	129000	130000	161000	370000	240000	141000	116000	89700
IN.	0.22	0.19	0.24	0.15	0.24	0.29	0.37	0.87	0.54	0.29	0.24	0.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

	MEAN	150600	157200	140600	131200	161900	251200	334500	326100	288600	243400	161200	146800
MAX	588300	380400	500100	323200	331000	528400	719100	630900	597200	795300	769500	551000	
(WY)	1987	1986	1983	1973	1974	1973	1973	1995	1947	1993	1993	1993	
MIN	59490	59320	51070	47810	52860	84200	129400	127200	81040	69050	69580	66030	
(WY)	1957	1957	1964	1964	1964	1964	2000	1989	1988	1988	1988	1976	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1942 - 2002
ANNUAL MEAN	235300	201000	207700
HIGHEST ANNUAL MEAN			441700
LOWEST ANNUAL MEAN			96770
HIGHEST DAILY MEAN	590000	Jun 11	732000
LOWEST DAILY MEAN	70700	Jan 1	85000
ANNUAL SEVEN-DAY MINIMUM	72600	Jan 1	87600
MAXIMUM PEAK FLOW	---		738000
MAXIMUM PEAK STAGE	---		40.95
INSTANTANEOUS LOW FLOW	---		82600
ANNUAL RUNOFF (INCHES)	4.51		3.85
10 PERCENT EXCEEDS	440000		391000
50 PERCENT EXCEEDS	179000		154000
90 PERCENT EXCEEDS	99400		102000

07020500 MISSISSIPPI RIVER AT CHESTER, IL--Continued

## WATER-QUALITY RECORDS

PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT: August 1980 to current year.

REMARKS.--Sediment records poor. Sediment record was computed from transport curve.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SUSPENDED-SEDIMENT CONCENTRATIONS: Maximum daily mean, 3,380 mg/L, Apr. 13, 1987; minimum daily mean, 13 mg/L, Mar. 18, 1981.

SUSPENDED-SEDIMENT LOADS: Maximum daily, 3,330,000 tons, Feb. 25, 1997; minimum daily, 3,580 tons, Mar. 18, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATIONS.--Maximum daily mean, 973 mg/L, May 10; minimum daily mean, 76 mg/L, Jan. 23 and 30.

SUSPENDED-SEDIMENT LOADS.--Maximum daily, 1,450,000 tons, May 10; minimum daily 17,500 tons, Jan. 23.

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	134000	191	69300	143000	171	66200	149000	142	57000
2	127000	188	64800	137000	158	58300	149000	140	56400
3	118000	176	56200	135000	149	54100	149000	132	53000
4	106000	163	46900	136000	145	53500	150000	124	50100
5	99400	153	41200	137000	143	52800	151000	117	47700
6	104000	151	42600	139000	141	52800	148000	110	44000
7	103000	151	42200	138000	141	52600	140000	105	39700
8	107000	155	45100	133000	138	49200	132000	103	37000
9	112000	159	48300	125000	130	43700	128000	102	35200
10	115000	163	50700	126000	128	43500	125000	101	34100
11	113000	159	48500	128000	129	44500	128000	105	36300
12	116000	159	49700	125000	124	41800	135000	109	39600
13	132000	175	62300	121000	119	38700	144000	114	44300
14	139000	188	70500	118000	114	36100	147000	121	47800
15	141000	190	72300	114000	114	34900	155000	127	53000
16	139000	181	68300	111000	113	33900	162000	143	62900
17	139000	174	65200	110000	110	32500	199000	323	175000
18	140000	169	64200	108000	106	30900	223000	328	198000
19	147000	166	65700	104000	106	29600	218000	278	164000
20	151000	165	67300	104000	110	30800	205000	246	136000
21	157000	176	74700	102000	113	31200	190000	220	113000
22	153000	170	69500	103000	109	30300	175000	198	93400
23	138000	165	61600	99200	105	28200	173000	202	94400
24	147000	201	79800	96300	111	28700	169000	197	90200
25	168000	280	127000	112000	148	45000	153000	177	73200
26	179000	282	136000	123000	157	52100	133000	149	53700
27	167000	254	115000	118000	130	41700	129000	140	48700
28	154000	211	88100	118000	118	37700	118000	136	43600
29	157000	210	89100	121000	116	37800	99400	119	32100
30	150000	190	77400	136000	125	45900	90300	105	25500
31	145000	174	68000	---	---	---	86900	96	22400

## MISSISSIPPI RIVER MAIN STEM

07020500 MISSISSIPPI RIVER AT CHESTER, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
DAY									
JANUARY			FEBRUARY			MARCH			
1	95000	111	28400	193000	255	140000	154000	175	72700
2	94400	116	29800	270000	523	381000	159000	190	81700
3	88900	105	25200	271000	471	346000	164000	200	88400
4	86500	93	21800	244000	393	259000	166000	185	83000
5	86400	82	19200	210000	331	188000	159000	168	71900
6	91500	81	19800	188000	277	140000	142000	151	57800
7	93500	82	20600	171000	233	107000	130000	140	49000
8	92500	82	20600	159000	196	83900	137000	160	59100
9	93700	83	21100	147000	167	66400	157000	324	140000
10	102000	84	23100	143000	158	61300	180000	509	247000
11	104000	85	23700	144000	151	58700	188000	424	214000
12	100000	85	23100	141000	143	54400	199000	365	195000
13	103000	86	23900	140000	134	50700	195000	345	181000
14	104000	85	23800	139000	126	47200	186000	327	165000
15	105000	85	24000	143000	124	47600	183000	316	156000
16	101000	84	22900	144000	133	51800	191000	321	166000
17	96800	82	21400	139000	140	52300	194000	322	169000
18	98100	79	20900	132000	137	48800	190000	308	158000
19	93500	77	19400	132000	134	47800	190000	293	150000
20	94200	79	20000	134000	131	47600	200000	277	150000
21	93100	81	20300	131000	128	45200	196000	251	133000
22	89900	78	19100	129000	130	45400	192000	225	116000
23	85100	76	17500	142000	142	54800	189000	199	102000
24	85000	107	24700	153000	156	64600	181000	178	87300
25	91400	118	29200	163000	178	78600	190000	197	101000
26	89500	100	24100	170000	189	86700	205000	222	123000
27	87000	90	21100	162000	170	74300	198000	203	108000
28	87100	84	19700	152000	160	65700	191000	182	93500
29	88000	78	18500	---	---	---	192000	175	90900
30	94600	76	19300	---	---	---	196000	175	92600
31	110000	100	30200	---	---	---	188000	165	83800
APRIL			MAY			JUNE			
1	177000	144	69000	413000	646	721000	391000	327	345000
2	164000	124	55000	418000	626	707000	356000	295	283000
3	161000	123	53500	411000	541	600000	338000	276	252000
4	164000	131	57900	399000	468	503000	332000	261	235000
5	165000	131	58600	387000	417	436000	324000	246	215000
6	165000	128	57300	370000	367	368000	313000	231	195000
7	166000	125	56100	370000	344	344000	312000	219	185000
8	173000	206	96800	417000	487	554000	323000	245	214000
9	182000	214	105000	495000	819	1100000	332000	281	253000
10	199000	210	113000	554000	973	1450000	343000	326	302000
11	223000	229	138000	592000	803	1280000	354000	437	418000
12	231000	258	160000	616000	688	1140000	378000	547	559000
13	226000	262	160000	655000	652	1150000	399000	601	647000
14	222000	250	150000	678000	625	1150000	424000	649	743000
15	221000	232	138000	698000	599	1130000	445000	682	819000
16	211000	214	122000	715000	571	1100000	450000	618	750000
17	209000	204	115000	732000	530	1050000	443000	537	642000
18	213000	200	115000	732000	479	948000	428000	482	556000
19	215000	204	118000	716000	409	790000	408000	436	480000
20	221000	210	126000	693000	380	711000	382000	391	404000
21	238000	263	170000	659000	360	640000	351000	350	331000
22	277000	382	287000	616000	337	560000	320000	321	277000
23	313000	498	421000	570000	314	483000	299000	292	235000
24	316000	524	447000	524000	291	412000	280000	264	200000
25	322000	457	397000	482000	271	353000	268000	241	174000
26	327000	439	388000	453000	258	316000	264000	222	159000
27	324000	439	384000	439000	246	292000	256000	204	141000
28	329000	546	486000	440000	249	296000	249000	186	125000
29	356000	628	604000	449000	346	419000	242000	168	110000
30	392000	650	687000	442000	395	472000	240000	151	98000
31	---	---	---	422000	360	411000	---	---	---



07020500 MISSISSIPPI RIVER AT CHESTER, IL--Continued

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
JULY			AUGUST			SEPTEMBER			
1	235000	147	93000	147000	126	49800	181000	155	75700
2	226000	144	88200	143000	122	47000	172000	149	69100
3	221000	142	84700	135000	118	43100	163000	141	62000
4	218000	140	81900	128000	114	39600	155000	132	55300
5	214000	137	79400	127000	111	37900	145000	125	48800
6	210000	135	76400	124000	108	36000	134000	118	42900
7	206000	132	73400	124000	105	35100	127000	110	37700
8	202000	130	70500	123000	102	33900	123000	102	33800
9	196000	127	67100	122000	98	32500	121000	98	31900
10	192000	126	65300	116000	94	29500	122000	98	32200
11	190000	134	68700	117000	96	30200	120000	98	31700
12	189000	144	73500	118000	98	31100	119000	98	31500
13	192000	148	77000	117000	95	29800	124000	95	31600
14	192000	141	73100	123000	102	33700	125000	90	30500
15	186000	134	67000	130000	108	38100	125000	86	29000
16	178000	126	60600	134000	111	40100	125000	82	27500
17	165000	119	52900	134000	113	40700	123000	82	27300
18	156000	112	47100	138000	114	42500	126000	84	28300
19	155000	105	43900	134000	109	39300	124000	79	26400
20	152000	101	41200	137000	118	43600	127000	99	34100
21	152000	98	40300	155000	146	61000	130000	107	37700
22	159000	96	41200	158000	148	63000	124000	97	32300
23	159000	94	40200	156000	143	60500	114000	90	27500
24	158000	91	38900	160000	161	70000	112000	89	27100
25	157000	89	37800	199000	195	105000	113000	91	28000
26	154000	89	37300	217000	201	118000	108000	92	26900
27	150000	90	36500	214000	192	111000	102000	89	24600
28	146000	90	35600	207000	180	101000	94600	85	21600
29	144000	91	35200	196000	170	89800	89700	81	19700
30	141000	104	39500	189000	164	83600	92800	81	20300
31	147000	129	51300	187000	159	80500	---	---	---

## SALINE CREEK BASIN

07020550 SOUTH FORK SALINE CREEK NEAR PERRYVILLE, MO

LOCATION.--Lat 37°44'13", long 89°55'42", Perry County, Hydrologic Unit 07140105, on State Route T, 0.13 mi northeast of junction of State Highways M and T, .25 mi west of I-55, 2.5 mi west of Perryville.

DRAINAGE AREA.--55.3 mi<sup>2</sup>.

PERIOD OF RECORD.--June 10, 1998 to current year.

GAGE.--Water stage recorder. Datum of gage 444.70 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.3	14	143	21	734	38	81	125	28	14	8.9	9.7
2	8.0	13	87	20	230	41	74	110	26	14	9.0	9.8
3	8.0	12	66	18	148	51	68	97	24	14	9.1	8.7
4	6.2	11	51	17	108	43	59	86	23	13	8.9	8.9
5	5.0	10	43	17	82	40	53	73	25	14	8.3	8.6
6	6.9	9.1	92	18	72	38	50	74	25	14	8.5	8.3
7	6.9	9.5	85	18	63	36	49	83	22	13	8.2	8.0
8	5.9	9.5	61	17	54	35	380	3910	21	12	7.6	8.9
9	4.4	9.4	47	17	49	1510	203	904	25	12	7.5	7.9
10	7.2	9.1	37	17	44	310	128	278	26	32	7.4	8.4
11	24	8.8	33	16	40	175	102	150	23	31	9.8	8.2
12	15	8.4	33	15	36	178	118	731	25	18	9.1	8.0
13	50	8.0	41	15	33	140	286	4100	22	15	11	7.9
14	58	8.1	225	15	31	113	663	417	21	13	13	8.3
15	30	8.0	148	14	29	133	257	174	19	12	11	10
16	32	8.0	675	14	27	231	162	112	19	12	11	8.5
17	23	7.9	1640	14	27	140	122	1850	18	12	11	15
18	18	8.1	383	13	25	113	100	431	17	11	12	13
19	16	8.3	206	15	69	557	88	177	17	11	12	11
20	13	7.5	134	14	247	645	91	109	17	10	214	65
21	12	7.3	99	14	129	269	210	80	16	10	27	29
22	11	7.4	87	14	90	164	115	64	16	10	19	18
23	38	8.2	73	16	70	125	85	55	16	10	17	14
24	98	19	58	93	59	104	78	47	16	9.9	15	12
25	60	18	47	61	54	334	73	42	16	9.6	14	10
26	36	15	42	49	57	483	62	38	15	9.5	13	9.8
27	26	15	36	41	48	216	151	35	16	9.3	12	9.5
28	21	40	32	37	42	154	344	45	17	9.5	11	9.0
29	19	129	29	34	---	125	160	39	16	8.9	10	9.1
30	16	643	26	34	---	103	117	33	15	10	9.7	7.9
31	15	---	23	1060	---	90	---	30	---	9.6	9.6	---
MEAN	22.5	36.3	154	57.4	96.3	217	151	468	20.1	13.0	17.9	12.4
MAX	98	643	1640	1060	734	1510	663	4100	28	32	214	65
MIN	4.4	7.3	23	13	25	35	49	30	15	8.9	7.4	7.9

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

MEAN	12.7	19.4	51.6	55.8	95.1	90.7	127	141	28.4	30.2	20.0	8.48
MAX	22.5	36.3	154	130	152	217	309	468	48.0	87.8	33.6	12.3
(WY)	2002	2002	2002	1999	1999	2002	1999	2002	2000	2001	2001	2002
MIN	7.55	9.23	16.0	14.8	47.9	19.7	17.9	15.8	13.4	9.27	6.31	4.69
(WY)	2001	2000	1999	2001	2000	2001	2000	2000	2001	2000	2000	2000

## SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1998 - 2002

ANNUAL MEAN	44.0	106	56.7
HIGHEST ANNUAL MEAN			106
LOWEST ANNUAL MEAN			20.0
HIGHEST DAILY MEAN	1640	4100	4540
LOWEST DAILY MEAN	4.4	4.4	2.7
ANNUAL SEVEN-DAY MINIMUM	6.1	6.1	3.2
MAXIMUM PEAK FLOW	---	11800 <sup>a</sup>	18700 <sup>a</sup>
MAXIMUM PEAK STAGE	---	16.04	19.13
INSTANTANEOUS LOW FLOW	---	4.4	0.99
10 PERCENT EXCEEDS	82	177	94
50 PERCENT EXCEEDS	17	25	15
90 PERCENT EXCEEDS	8.3	8.5	7.4

<sup>a</sup> From rating extended above 5,000 ft<sup>3</sup>/s.

## HEADWATER DIVERSION CHANNEL BASIN

365

07021000 CASTOR RIVER AT ZALMA, MO

LOCATION.--Lat 37°08'48", long 90°04'32", in SE ¼ sec.29, T.29 N., R.9 E., Bollinger County, Hydrologic Unit 07140107, on downstream side of left bridge pier on State Highway 51 in Zalma and 2.5 mi downstream from Perkins Creek.

DRAINAGE AREA.--423 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--January 1920 to September 1991, November 8, 2000 to current year. Prior to October 1921 monthly discharge only published in WSP 1311.

REVISED RECORDS.--WSP 1147: 1922-23(M). WSP 1281: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 350.38 ft above National Geodetic Vertical Datum of 1929. January 1920 to Oct. 1, 1925, at site 500 ft upstream at datum 49.82 ft lower; Oct. 1, 1925 to Nov. 12, 1930, at site 500 ft upstream at datum 0.18 ft higher; Nov. 13, 1930 to June 8, 1953, nonrecording gage at present site and datum; June 1953 to September 1991 and October 2000 to current year, water-stage recorder at present site and datum; Dec. 18, 1949 to September 1991, auxiliary nonrecording gage 6.0 mi downstream; October 2000 to current year, auxiliary water-stage recorder 6.0 mi downstream.

REMARKS.--Water-discharge records good except for estimated daily discharges and those above 2,000 ft<sup>3</sup>/s, which are fair.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of 1915 reached a stage of 28.0 ft, present datum, from floodmarks by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	67	127	1190	280	4450	427	729	1420	321	117	92	146
2	67	124	819	261	3920	408	643	1250	294	111	88	137
3	65	121	596	246	1770	420	577	1060	274	107	85	129
4	64	115	488	233	1180	397	516	859	252	104	e82	121
5	68	111	421	224	964	382	468	723	286	103	e80	115
6	71	107	407	227	745	371	429	632	433	99	e76	109
7	72	103	412	225	645	358	401	609	307	95	72	104
8	73	100	425	215	567	346	530	3860	261	91	69	100
9	74	98	403	209	509	1980	1310	12500	238	87	66	98
10	78	96	368	203	462	5540	1120	9190	229	93	64	95
11	146	95	339	196	423	2880	856	3550	222	98	63	92
12	180	93	340	190	392	1650	725	1530	217	204	61	89
13	220	92	373	185	363	1390	960	15200	228	253	375	86
14	264	91	551	181	338	1120	3240	21600	207	196	1210	85
15	268	90	827	175	319	905	4670	6140	190	172	295	88
16	245	90	1590	170	302	1850	2300	1990	184	149	210	99
17	218	89	5670	167	285	1790	1460	5070	189	137	177	99
18	198	87	8920	166	271	1270	1110	18400	176	128	158	108
19	182	89	3960	172	324	2040	952	6810	162	120	157	120
20	169	91	1540	171	1890	4380	1720	2370	154	116	200	304
21	157	89	1010	167	1980	4760	2230	1400	147	112	292	569
22	147	87	974	167	1240	2410	1750	1110	141	108	228	372
23	140	88	734	177	895	1500	1230	1030	134	109	191	285
24	138	95	591	798	726	1200	2620	806	128	104	e500	239
25	145	109	514	891	629	1180	4500	613	127	97	e400	211
26	158	127	461	693	572	4030	2530	528	127	92	e300	193
27	163	150	420	592	512	3720	1660	453	122	88	250	181
28	156	175	386	526	463	1980	1580	415	128	85	210	169
29	147	288	355	478	---	1450	1430	407	120	82	187	157
30	140	995	325	456	---	1140	1120	377	116	79	170	148
31	133	---	302	992	---	887	---	354	---	88	156	---
MEAN	142	140	1152	324	969	1747	1512	3944	204	117	212	162
MAX	268	995	8920	992	4450	5540	4670	21600	433	253	1210	569
MIN	64	87	302	166	271	346	401	354	116	79	61	85
IN.	0.39	0.37	3.14	0.88	2.39	4.76	3.99	10.8	0.54	0.32	0.58	0.43

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	161	404	591	714	714	1035	1025	820	425	167	108	1178
MAX	1576	2045	5507	3735	2279	3521	3645	3944	4082	1195	298	883	
(WY)	1985	1985	1983	1937	1989	1945	1927	2002	1928	1976	1982	1965	
MIN	37.0	59.1	72.1	60.7	95.4	98.0	142	90.2	43.9	33.4	22.5	31.5	
(WY)	1921	1921	1956	1956	1934	1941	1971	1932	1936	1936	1936	1953	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	324	889	523
HIGHEST ANNUAL MEAN			1088
LOWEST ANNUAL MEAN			149
HIGHEST DAILY MEAN	8920	Dec 18	21600
LOWEST DAILY MEAN	64	Jul 12	61
ANNUAL SEVEN-DAY MINIMUM	66	Jul 11	67
MAXIMUM PEAK FLOW	---		45600
MAXIMUM PEAK STAGE	---		27.78
INSTANTANEOUS LOW FLOW	---		61
ANNUAL RUNOFF (INCHES)	10.40		28.53
10 PERCENT EXCEEDS	596		1870
50 PERCENT EXCEEDS	156		261
90 PERCENT EXCEEDS	72		89

e Estimated

a Discharge determined by indirect measurement.

## HEADWATER DIVERSION CHANNEL BASIN

07021000 CASTOR RIVER AT ZALMA, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF REOCD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 07...	1145	ENVIRONMENTAL		103	8.2	77	7.7	237	12.3	130	26.3	15.0	.21	
JAN 17...	0930	ENVIRONMENTAL		167	11.7	91	7.8	192	4.8	--	--	--	--	
MAR 25...	1420	ENVIRONMENTAL		1100	10.0	88	7.5	115	9.1	--	--	--	--	
MAY 13...	1505	ENVIRONMENTAL		8690	8.0	84	6.8	38	17.4	23	5.18	2.55	E.08	
JUL 10...	1400	ENVIRONMENTAL		103	6.0	79	7.8	212	29.2	--	--	--	--	
SEP 10...	1630	ENVIRONMENTAL		94	7.2	90	7.8	208	26.1	--	--	--	--	
DATE		ANC WATER UNFLTRD FET FIELD (mg/L as Na) (00930)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	
NOV 07...	2.69	121	122	149	0	2.79	<.1	3.6	18	138	<.04	.11	<.05	
JAN 17...	--	88	88	107	0	--	--	--	<10	--	<.04	E.06	.25	
MAR 25...	--	50	49	60	0	--	--	--	34	--	<.04	.24	.20	
MAY 13...	1.64	23	21	26	0	1.56	<.1	3.1	348	67	E.04	1.3	.11	
JUL 10...	--	100	100	122	0	--	--	--	21	--	<.04	.22	<.05	
SEP 10...	--	111	112	137	0	--	--	--	22	--	<.04	.12	<.05	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 07...	<.008	<.06	<.02	<.06	41	41	58	16	84	.2	<.04	<.1	<6	
JAN 17...	<.008	<.06	<.02	<.06	29	52	56	--	--	--	--	--	--	
MAR 25...	.008	<.06	<.02	E.06	160	340	540	--	--	--	--	--	--	
MAY 13...	.032	E.05	.05	.30	6200	7800	33000	651	2590	.5	<.04	E.1	E4	
JUL 10...	<.008	<.06	<.02	<.06	72	K180	740	--	--	--	--	--	--	
SEP 10...	<.008	<.06	<.02	E.04	K25	46	74	--	--	--	--	--	--	

07021000 CASTOR RIVER AT ZALMA, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 07...	154	.09	M	40.8	E.01	<.3	--	2
JAN 17...	--	--	--	--	--	--	--	--
MAR 25...	--	--	--	--	--	--	--	--
MAY 13...	705	1.95	17	27.8	.04	<.3	--	21
JUL 10...	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL

LOCATION.--Lat 37°13'00", long 89°27'50", in NW ¼ sec.17, T.15 S., R.3 W., Alexander County, Hydrologic Unit 07140105, near center span on downstream side of railroad bridge at Thebes, 5.0 mi downstream from Headwater Diversion Channel, and at mile 43.7 above Ohio River.

DRAINAGE AREA.--713,200 mi<sup>2</sup>, approximately.

## WATER-DISCHARGE RECORDS

## PERIOD OF RECORD.--

DISCHARGE: October 1932 to current year. Monthly discharge only for some periods, published in WSP 1311. Prior to April 1941, published as "at Cape Girardeau, Mo".

GAGE HEIGHT: March 1933 to February 1938 and October 1939 to current year. Prior to April 1941, published as "at Cape Girardeau, Mo". Since November 1878, under name of "at Grays Point" in files of the U.S. Army Corps of Engineers; January 1879 to May of 1896, published as "at Grays Point"; since May 1896, published as "at Cape Girardeau, in reports of the Mississippi River Commission; February 1891 to February 1894 and since 1904, published as "at Cape Girardeau in reports of the National Weather Service.

REVISED RECORDS.--WSP 1341: 1844(M). WDR MO-76-1: Drainage area, WDR MO-98-1: Extreme outside period of record.

GAGE.--Water-stage recorder. Datum of gage is 300.00 ft above National Geodetic Vertical Datum of 1929. Mar. 17, 1933, to Dec. 21 1934, nonrecording gage; Dec. 22, 1934, to Apr. 4, 1941, water-stage recorder, at site 8.2 mi upstream at datum 4.65 ft higher; Apr. 5, 1941, to Sept. 30, 1941, nonrecording gage at present site and datum; Oct. 1, 1941, to Oct. 11, 1943, at datum 0.07 ft higher. Prior to Apr. 5, 1941, various auxiliary gages used. Since Oct. 1, 1943, former gage at Cape Girardeau used as auxiliary gage.

REMARKS.--Water-discharge records good. Natural flow of stream affected by many reservoirs and navigation dams in the upper Mississippi River Basin and by many reservoirs and diversions for irrigation in the Missouri River Basin. U.S. Army Corps of Engineers satellite telemeter and telemark at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 4, 1844, reached an elevation of 345.14 ft, present datum, at Grays Point, from floodmarks, discharge, 1,075,000 ft<sup>3</sup>/s, computed by the U.S. Army Corps of Engineers.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	136000	146000	157000	99600	173000	157000	206000	439000	445000	246000	149000	186000
2	131000	143000	163000	104000	272000	159000	192000	454000	406000	240000	147000	179000
3	125000	138000	163000	101000	313000	164000	180000	454000	375000	232000	143000	170000
4	116000	136000	164000	96200	293000	168000	181000	441000	360000	227000	136000	162000
5	106000	137000	164000	94000	257000	168000	182000	427000	351000	222000	130000	153000
6	102000	137000	163000	94200	222000	159000	182000	410000	339000	219000	128000	144000
7	105000	139000	157000	97700	200000	143000	181000	401000	327000	214000	125000	134000
8	105000	137000	148000	99500	183000	136000	183000	441000	330000	209000	125000	127000
9	108000	131000	140000	98500	169000	152000	193000	508000	342000	204000	125000	124000
10	112000	125000	134000	101000	160000	192000	201000	564000	353000	198000	123000	122000
11	118000	126000	132000	107000	156000	198000	221000	606000	363000	196000	118000	123000
12	118000	127000	135000	108000	154000	207000	239000	640000	378000	193000	120000	121000
13	124000	124000	143000	106000	149000	212000	243000	704000	402000	194000	122000	121000
14	141000	121000	155000	108000	147000	205000	247000	749000	420000	196000	125000	125000
15	145000	118000	164000	108000	147000	197000	245000	757000	441000	194000	128000	126000
16	145000	114000	175000	109000	149000	205000	234000	771000	453000	186000	133000	126000
17	144000	112000	227000	105000	148000	209000	224000	814000	453000	177000	135000	126000
18	142000	111000	262000	103000	142000	207000	225000	828000	444000	165000	136000	126000
19	144000	108000	261000	103000	137000	209000	228000	807000	427000	159000	139000	127000
20	148000	106000	247000	99500	146000	230000	233000	775000	405000	157000	136000	126000
21	152000	105000	232000	99500	147000	231000	248000	738000	378000	153000	144000	131000
22	156000	104000	212000	97900	140000	222000	275000	692000	347000	155000	156000	131000
23	148000	104000	202000	95800	140000	220000	318000	649000	320000	161000	158000	123000
24	141000	101000	199000	103000	151000	213000	340000	606000	301000	160000	157000	116000
25	156000	101000	187000	104000	160000	213000	344000	559000	287000	159000	171000	115000
26	175000	115000	167000	108000	170000	247000	353000	520000	280000	157000	206000	114000
27	180000	124000	152000	105000	173000	242000	352000	494000	271000	155000	218000	110000
28	168000	122000	145000	103000	164000	226000	356000	482000	262000	150000	213000	104000
29	159000	127000	131000	103000	---	220000	373000	487000	255000	147000	205000	98800
30	158000	140000	114000	106000	---	223000	408000	486000	249000	144000	195000	96200
31	151000	---	103000	117000	---	220000	---	472000	---	144000	189000	---
MEAN	137400	122600	170900	102700	177200	198500	252900	586300	358800	184300	149500	129600
MAX	180000	146000	262000	117000	313000	247000	408000	828000	453000	246000	218000	186000
MIN	102000	101000	103000	94000	137000	136000	180000	401000	249000	144000	118000	96200
IN.	0.22	0.19	0.28	0.17	0.26	0.32	0.40	0.95	0.56	0.30	0.24	0.20

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1933 - 2002, BY WATER YEAR (WY)

	MEAN	149800	157200	142100	134600	164600	252500	329700	325700	290300	239600	157100	142900
MAX	589600	389000	531700	333300	350400	542000	731000	655800	584100	765500	768000	539300	
(WY)	1987	1986	1983	1973	1974	1985	1973	1973	1947	1993	1993	1993	
MIN	45500	50080	53850	33650	46920	80260	115600	88170	72350	73290	45000	59890	
(WY)	1940	1940	1956	1940	1940	1934	1934	1934	1934	1936	1936	1937	

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1933 - 2002	
ANNUAL MEAN	241400		214500		207600	
HIGHEST ANNUAL MEAN					446000 1993	
LOWEST ANNUAL MEAN					71730 1934	
HIGHEST DAILY MEAN	613000	Jun 13	828000	May 18	978000	Aug 7 1993
LOWEST DAILY MEAN	76200	Jan 2	94000	Jan 5	24700	Jan 21 1940
ANNUAL SEVEN-DAY MINIMUM	77400	Jan 1	97300	Jan 3	26700	Jan 20 1940
MAXIMUM PEAK FLOW	---		838000	May 18	996000	Aug 7 1993
MAXIMUM PEAK STAGE	---		44.32	May 18	45.91	May 23 1995
INSTANTANEOUS LOW FLOW	---		93300	Jan 5,6	23400	Dec 13 1937
ANNUAL RUNOFF (INCHES)	4.60		4.08		3.96	
10 PERCENT EXCEEDS	446000		414000		405000	
50 PERCENT EXCEEDS	187000		159000		167000	
90 PERCENT EXCEEDS	104000		106000		75900	

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued  
(National Stream-Quality Accounting Network)

PERIOD OF RECORD.--January 1973 to current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1974 to September 1981.

WATER TEMPERATURE: October 1974 to September 1981.

SUSPENDED-SEDIMENT: October 1980 to current year.

REMARKS.--National Stream-Quality Accounting Network (NASQAN) station January 1973 to September 1986. Illinois Environmental Protection Agency station October 1986 to September 1994 (during this period, samples were analyzed by the Illinois EPA). Re-established as a NASQAN station October 1994 to current year. Sediment records fair except for estimated daily loads, which are poor.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum daily, 705 microsiemens per centimeter, Aug. 5-7, 1980; minimum daily, 272 microsiemens per centimeter, Apr. 6, 1979.

WATER TEMPERATURE: Maximum daily, 31.5 °C, July 10, 11, 1975, and July 17, 1977; minimum daily, 0.0 °C, on several days during winter periods.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 3,890 mg/L, Dec. 22, 1985; minimum daily mean, 13 mg/L, Jan. 28, 1981.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 6,280,000 tons, Mar. 1, 1985; minimum daily, 2,530 tons, Jan. 28, 1981.

EXTREMES FOR CURRENT YEAR.--

SUSPENDED-SEDIMENT CONCENTRATION.--Maximum daily mean, 987 mg/L, May 11; minimum daily mean, 72 mg/L, Jan. 29, 30.

SUSPENDED-SEDIMENT LOAD.--Maximum daily, 161,000 tons, May 11; minimum daily 20,100 tons, Jan. 29.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]



WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CALCIUM DIS- SOLVED	MAGNE- SIUM, DIS- SOLVED	POTAS- SIUM, DIS- SOLVED	SODIUM, DIS- SOLVED	ALKA- LINITY WAT DIS FIX END FIELD	ALKA- LINITY WAT DIS TOT IT FIELD	BICAR- BONATE WATER DIS IT FIELD	CAR- BONATE WATER DIS IT FIELD	CHLO- RIDE, DIS- SOLVED	FLUO- RIDE, DIS- SOLVED	SILICA, DIS- SOLVED	SULFATE DIS- SOLVED	SOLIDS, RESIDUE AT 180 DEG. C
	(mg/L as Ca) (00915)	(mg/L as Mg) (00925)	(mg/L as K) (00935)	(mg/L as Na) (00930)	(mg/L as CaCO <sub>3</sub> ) (39036)	(mg/L as CaCO <sub>3</sub> ) (39086)	(mg/L as HCO <sub>3</sub> ) (00453)	(mg/L as CO <sub>3</sub> ) (00452)	(mg/L as Cl) (00940)	(mg/L as F) (00950)	(mg/L as SiO <sub>2</sub> ) (00955)	(mg/L as SO <sub>4</sub> ) (00945)	(mg/L DIS- SOLVED (70300)
OCT 17...	45.0	17.2	5.45	29.8	123	128	156	0	27.5	.3	6.89	74.8	316
NOV 26...	56.6	22.6	4.31	38.1	159	160	195	0	29.7	.3	5.48	96.6	390
JAN 14...	57.7	22.2	3.92	28.4	184	184	224	0	27.8	.3	8.99	65.1	358
FEB 13...	53.2	20.2	3.70	24.5	166	167	189	7	32.2	.2	7.76	57.3	326
MAR 06...	55.4	21.0	3.41	26.5	167	169	206	0	33.6	.3	6.66	58.9	332
06...	<.01	<.008	--	<.09	--	--	--	--	--	--	<.13	--	--
25...	54.2	21.3	3.42	29.7	173	177	216	0	36.9	.2	7.27	58.2	334
APR 03...	49.3	20.3	3.48	26.8	160	161	179	8	30.1	.3	6.08	60.9	323
03...	49.8	20.6	3.52	26.9	--	--	--	--	30.7	.3	6.02	61.5	323
15...	45.9	18.8	3.68	23.6	120	122	149	0	26.7	.2	4.63	58.0	293
29...	39.3	14.9	3.42	16.8	99	100	122	0	21.1	.2	6.88	38.3	244
MAY 09...	36.8	13.6	3.54	13.2	134	128	157	0	16.1	.1	6.22	35.6	228
14...	30.5	9.93	3.52	9.30	93	93	113	0	10.4	.1	6.43	25.7	183
JUN 12...	44.5	17.4	3.51	16.8	130	133	162	0	21.1	.2	5.68	44.6	260
JUL 10...	48.7	18.5	3.64	21.2	154	154	188	0	22.7	.3	7.11	59.4	307
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	48.8	18.8	4.08	21.7	--	--	--	--	22.0	.3	7.12	59.0	287
AUG 14...	46.5	19.2	3.97	30.2	151	151	184	0	21.5	.3	4.46	70.4	294
14...	46.5	19.3	3.83	30.7	--	--	--	--	22.0	.3	4.34	71.7	300
SEP 11...	49.0	19.4	4.10	30.2	150	149	177	2	20.4	.3	7.75	74.3	320
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	NITRO- GEN, AMMONIA DIS- SOLVED	NITRO- GEN,AM- MONIA + ORGANIC DIS.	NITRO- GEN,AM- MONIA + ORGANIC TOTAL	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED	NITRO- GEN, NITRITE DIS- SOLVED	NITRO- GEN,PAR TICULATE WAT FLT SUSP	PHOS- PHORUS DIS- SOLVED	PHOS- PHORUS ORTHO, DIS- SOLVED	PHOS- PHORUS TOTAL	CARBON, INORG + ORGANIC PARTIC. TOTAL	CARBON, INOR- GANIC, PARTIC. TOTAL	CARBON, ORGANIC DIS- SOLVED	CARBON, ORGANIC PARTIC- ULATE TOTAL
	(mg/L as N) (00608)	(mg/L as N) (00623)	(mg/L as N) (00625)	(mg/L as N) (00631)	(mg/L as N) (00613)	(mg/L as N) (49570)	(mg/L as P) (00666)	(mg/L as P) (00671)	(mg/L as P) (00665)	(mg/L as C) (00694)	(mg/L as C) (00688)	(mg/L as C) (00681)	(mg/L as C) (00689)
OCT 17...	.05	.41	.82	.90	.016	.45	.140	.125	.26	3.7	<.1	30.6	3.7
NOV 26...	.09	.45	.98	1.20	.010	.48	.093	.079	.23	4.2	<.1	3.9	4.1
JAN 14...	.07	.44	.97	2.32	.010	.28	.091	.074	.169	2.6	<.1	4.4	2.6
FEB 13...	.07	.35	.96	3.19	.017	.55	.111	.103	.25	3.8	<.1	4.0	3.8
MAR 06...	E.03	.41	.90	2.80	.014	.53	.081	.060	.23	3.5	<.1	4.4	3.5
06...	<.015	--	--	<.013	<.002	--	--	<.007	--	--	--	--	--
25...	.05	.41	1.0	2.99	.017	.43	.084	.063	.22	3.7	<.1	4.4	3.7
APR 03...	.04	.40	1.1	2.44	.011	.50	.061	.048	.23	4.1	<.1	4.2	4.0
03...	E.03	.41	1.0	2.47	.012	.47	.064	.050	.23	4.1	<.1	4.4	4.0
15...	.06	.47	1.4	2.11	.020	.58	.081	.061	.33	4.7	<.1	4.8	4.7
29...	<.04	.50	1.7	2.13	.071	1.06	.089	.067	.57	9.2	.2	5.3	9.0
MAY 09...	<.04	.46	2.2	2.19	.041	.60	.090	.071	.62	5.8	.3	5.6	5.5
14...	<.04	.43	1.5	1.64	.055	.88	.079	.067	.53	9.4	<.1	6.0	9.3
JUN 12...	<.04	.36	1.1	2.96	.017	.44	.106	.089	.38	3.4	<.1	5.0	3.3
JUL 10...	<.04	.33	.81	2.54	.008	.20	.129	.117	.22	1.8	<.1	4.8	1.8
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	<.04	.31	.73	2.50	.008	.47	.129	.117	.22	2.9	.2	4.6	2.7
AUG 14...	<.04	.40	.86	.69	.033	.39	.127	.105	.26	2.5	<.1	5.6	2.5
14...	<.04	.41	.89	.69	.033	.41	.126	.107	.23	2.9	<.1	5.4	2.9
SEP 11...	<.04	.37	.79	1.26	E.005	.51	.157	.138	.22	3.0	<.1	5.7	3.0
11...	--	--	--	--	--	--	--	--	--	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

	PHEO- PHYTTIN A, PHYTO- PHYTON (µg/L) (62360)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	CHLOR-A PHYTO- PLANK- TON CHROMO FLUOROM (µg/L) (70953)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ANTI- MONY, DIS- SOLVED (µg/L as Sb) (01095)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	BARIUM, DIS- SOLVED (µg/L as Ba) (01005)	BERYL- LIUM, DIS- SOLVED (µg/L as Be) (01010)	BORON, DIS- SOLVED (µg/L as B) (01020)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CHRO- MIUM, DIS- SOLVED (µg/L as Cr) (01030)
OCT 17...	24.2	170	270	48	22.4	--	--	2.2	--	--	74	--	--
NOV 26...	24.3	380	K365	405	16.1	6	.28	1.8	60	<.06	74	E.02	<.8
JAN 14...	10.4	58	88	142	32.0	--	--	1.4	--	--	72	--	--
FEB 13...	14.2	K25	K54	44	32.2	--	--	1.3	--	--	52	--	--
MAR 06...	22.9	44	92	115	32.5	--	--	1.1	--	--	50	--	--
06...	--	--	--	--	--	<1	.16	<.2	<1	<.06	<7	<.04	<.8
25...	19.4	K52	K320	K62	30.5	3	.05	1.2	61	<.06	52	.08	<.8
APR 03...	25.5	50	62	48	33.2	--	--	1.3	--	--	44	--	--
03...	--	--	--	--	--	--	--	1.3	--	--	44	--	--
15...	26.3	320	480	516	22.3	--	--	1.4	--	--	48	--	--
29...	27.6	K110	840	1060	17.0	--	--	1.3	--	--	35	--	--
MAY 09...	19.4	1400	2800	9800	15.3	--	--	1.2	--	--	30	--	--
14...	12.1	1300	1850	3200	8.8	--	--	1.3	--	--	29	--	--
JUN 12...	9.9	120	K362	105	6.9	3	.23	1.7	70	<.06	40	E.02	<.8
JUL 10...	17.9	46	105	K17	36.5	--	--	2.3	--	--	51	--	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	20.2	--	--	--	40.4	--	--	2.3	--	--	52	--	--
AUG 14...	22.8	400	440	1480	44.4	--	--	2.8	--	--	73	--	--
14...	--	--	--	--	--	--	--	2.7	--	--	74	--	--
SEP 11...	27.7	21	34	85	52.8	3	.41	2.7	71	<.06	69	E.02	<.8
11...	--	--	--	--	--	--	--	--	--	--	--	--	--
	COBALT, DIS- SOLVED (µg/L as Co) (01035)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LITHIUM DIS- SOLVED (µg/L as Li) (01130)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MOLYB- DENUM, DIS- SOLVED (µg/L as Mo) (01060)	NICKEL, DIS- SOLVED (µg/L as Ni) (01065)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	SILVER, DIS- SOLVED (µg/L as Ag) (01075)	STRON- TIUM, DIS- SOLVED (µg/L as Sr) (01080)	VANA- DIUM, DIS- SOLVED (µg/L as V) (01085)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)
OCT 17...	--	--	<10	--	15.2	--	--	--	1.3	--	221	3.3	--
NOV 26...	.24	1.5	E6	.10	19.5	2.2	2.9	.60	.9	<1	280	2.2	3
JAN 14...	--	--	E8	--	11.6	--	--	--	1.1	--	246	2.7	--
FEB 13...	--	--	<10	--	8.2	--	--	--	1.0	--	186	2.1	--
MAR 06...	--	--	<10	--	8.5	--	--	--	1.0	--	199	1.1	--
06...	<.02	<.2	<10	<.08	<.3	<.1	<.2	<.06	<.3	<1	<.08	<.2	<1
25...	.29	1.8	E6	E.08	8.8	1.7	1.8	2.32	1.0	<1	187	.8	2
APR 03...	--	--	<10	--	9.2	--	--	--	1.1	--	193	2.2	--
03...	--	--	<10	--	8.9	--	--	--	1.1	--	190	2.0	--
15...	--	--	57	--	8.0	--	--	--	.8	--	171	2.2	--
29...	--	--	E6	--	6.1	--	--	--	.5	--	132	2.5	--
MAY 09...	--	--	11	--	4.8	--	--	--	.6	--	--	2.1	--
14...	--	--	20	--	3.2	--	--	--	.5	--	113	2.6	--
JUN 12...	.20	1.9	<10	<.08	7.2	.4	1.9	2.66	.9	<1	147	3.4	<1
JUL 10...	--	--	<10	--	11.4	--	--	--	1.2	--	181	3.3	--
10...	--	--	--	--	--	--	--	--	--	--	--	--	--
10...	--	--	<10	--	11.3	--	--	--	1.1	--	182	3.2	--
AUG 14...	--	--	<10	--	16.0	--	--	--	.9	--	203	4.7	--
14...	--	--	<10	--	16.1	--	--	--	.8	--	206	4.7	--
SEP 11...	.19	2.0	<10	<.08	16.4	.5	3.1	3.39	1.1	<1	225	4.5	<1
11...	--	--	--	--	--	--	--	--	--	--	--	--	--

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued  
(National Stream-Quality Accounting Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	2,6-DI-ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)
OCT													
17...	<.002	.034	<.002	<.005	.225	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.067
NOV													
26...	<.002	.027	.010	<.005	.085	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.051
JAN													
14...	<.006	.039	.005	<.005	.151	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.052
FEB													
13...	<.006	.025	<.004	<.005	.190	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.053
MAR													
06...	<.002	.027	<.002	<.005	.131	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.026
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<.006	.015	.016	<.005	.093	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.036
APR													
03...	<.006	<.010	.005	<.005	.099	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.036
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	<.006	.052	<.004	<.005	.304	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.035
29...	<.006	.434	.040	<.005	4.35	<.010	<.002	<.041	<.020	<.005	<.020	<.003	E.105
MAY													
09...	<.006	.322	.031	<.005	3.03	<.010	<.002	E.005	<.020	<.005	<.018	<.003	E.174
14...	<.006	.484	.053	<.005	4.09	<.010	<.002	E.004	E.004	<.005	E.015	<.003	E.259
JUN													
12...	<.006	.679	.019	<.005	2.80	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.177
JUL													
10...	<.006	.117	.015	<.005	1.04	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.221
10...	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006
10...	<.006	.126	.014	<.005	1.14	<.010	<.002	<.041	<.020	<.005	E.010	<.003	E.165
AUG													
14...	<.006	.016	.005	<.005	.354	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.097
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
11...	<.006	.014	<.004	<.005	.180	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.053
11...	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006
DATE	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)
OCT													
17...	.007	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.047
NOV													
26...	.007	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.031
JAN													
14...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.051
FEB													
13...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.020	.068
MAR													
06...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.053
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	.053	.039
APR													
03...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.029
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.066
29...	.008	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.652
MAY													
09...	.011	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.020	.396
14...	.009	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.680
JUN													
12...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.727
JUL													
10...	E.003	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.211
10...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013
10...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.231
AUG													
14...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.061
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP													
11...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	.041
11...	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013

## MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued  
(National Stream-Quality Accounting Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	METRI- BUZIN SENCOR WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)
OCT 17...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	E.01	<.004	<.010	<.011
NOV 26...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011
JAN 14...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
FEB 13...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
MAR 06...	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011
06...	--	--	--	--	--	--	--	--	--	--	--	--	--
25...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
APR 03...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
03...	--	--	--	--	--	--	--	--	--	--	--	--	--
15...	.010	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
29...	<.010	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011
MAY 09...	.009	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
14...	.020	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011
JUN 12...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011
JUL 10...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
10...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011
10...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
AUG 14...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
14...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011
11...	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011

DATE	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)	URANIUM NATURAL DIS- SOLVED (µg/L as U) (22703)	SED. SUSP. SIEVE DIAM. % FINER THAN .062 mm (70331)	SEDI- MENT, SUS- PENDEED (mg/L) (80154)
OCT 17...	<.02	.017	<.02	<.034	<.02	<.005	<.002	<.009	--	88	110
NOV 26...	<.02	.024	<.02	<.034	<.02	<.005	<.002	<.009	2.10	92	85
JAN 14...	<.02	.073	<.02	<.034	<.02	<.005	<.002	<.009	--	61	46
FEB 13...	<.02	.042	<.02	<.034	<.02	<.005	<.002	<.009	--	56	131
MAR 06...	<.02	.048	<.01	<.034	<.02	<.005	<.002	<.009	--	75	113
06...	--	--	--	--	--	--	--	--	<.02	--	--
25...	<.02	.037	<.02	<.034	<.02	<.005	<.002	<.009	1.80	81	108
APR 03...	<.02	.047	<.02	<.034	<.02	<.005	<.002	<.009	--	85	113
03...	--	--	--	--	--	--	--	--	--	--	--
15...	<.02	.039	<.02	<.034	<.02	<.005	<.002	<.009	--	85	230
29...	<.02	.231	<.02	<.034	<.02	<.005	<.002	<.009	--	80	600
MAY 09...	<.02	.344	<.02	<.034	<.02	<.005	<.002	<.009	--	85	663
14...	<.02	.308	E.01	<.034	<.02	<.005	<.002	<.009	--	66	633
JUN 12...	<.02	.057	<.02	<.034	<.02	<.005	<.002	<.009	1.62	73	399
JUL 10...	<.02	.030	<.02	<.034	<.02	<.005	<.002	<.009	--	82	88
10...	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	--	--	--
10...	<.02	.027	<.02	<.034	<.02	<.005	<.002	<.009	--	83	88
AUG 14...	<.02	.014	E.01	<.034	<.02	<.005	<.002	<.009	--	89	123
14...	--	--	--	--	--	--	--	--	--	92	103
SEP 11...	<.02	.010	<.02	<.034	<.02	<.005	<.002	<.009	2.10	87	60
11...	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result less than the value shown.

## MISSISSIPPI RIVER MAIN STEM

375

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued  
(National Stream-Quality Accounting Network)

SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCENTRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCENTRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCENTRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
OCTOBER			NOVEMBER			DECEMBER			
1	136000	188	69000	146000	125	49300	157000	171	72300
2	131000	223	78900	143000	131	50600	163000	121	53300
3	125000	243	81700	138000	141	52400	163000	101	44400
4	116000	223	70100	136000	139	50800	164000	108	48000
5	106000	204	58600	137000	137	50500	164000	105	46400
6	102000	196	54100	137000	141	52200	163000	96	42300
7	105000	174	49100	139000	125	46900	157000	93	39600
8	105000	157	44500	137000	122	45100	148000	97	38900
9	108000	140	41000	131000	127	44900	140000	105	39400
10	112000	133	40400	125000	127	42900	134000	108	39000
11	118000	149	47400	126000	123	41800	132000	109	38900
12	118000	174	55500	127000	116	39700	135000	98	35700
13	124000	180	60200	124000	121	40400	143000	96	36900
14	141000	211	80400	121000	111	36200	155000	95	39900
15	145000	217	84800	118000	98	31200	164000	105	46500
16	145000	170	66800	114000	89	27400	175000	148	70700
17	144000	150	58200	112000	90	27100	227000	307	189000
18	142000	130	49900	111000	97	29100	262000	381	269000
19	144000	122	47400	108000	104	30200	261000	354	250000
20	148000	106	42500	106000	105	30100	247000	310	207000
21	152000	119	48800	105000	98	27700	232000	293	183000
22	156000	129	54500	104000	98	27700	212000	260	149000
23	148000	126	50400	104000	94	26400	202000	252	137000
24	141000	143	54700	101000	93	25500	199000	---	e128000
25	156000	166	70000	101000	111	30600	187000	---	e108000
26	175000	163	77100	115000	145	45100	167000	---	e84900
27	180000	180	87800	124000	158	52800	152000	---	e70600
28	168000	168	76400	122000	156	51400	145000	---	e66600
29	159000	156	67000	127000	143	48700	131000	---	e51700
30	158000	150	64200	140000	140	53200	114000	---	e37400
31	151000	131	53400	---	---	---	103000	---	e29800
JANUARY			FEBRUARY			MARCH			
1	99600	---	e26600	173000	363	173000	157000	162	68900
2	104000	---	e29100	272000	426	314000	159000	154	66100
3	101000	---	e26400	313000	497	419000	164000	156	69200
4	96200	---	e23300	293000	549	435000	168000	204	92700
5	94000	91	23100	257000	479	333000	168000	188	85500
6	94200	97	24800	222000	403	242000	159000	145	62300
7	97700	90	23700	200000	321	174000	143000	141	54400
8	99500	80	21500	183000	240	119000	136000	141	51600
9	98500	82	21900	169000	184	84300	152000	216	91800
10	101000	86	23300	160000	159	68500	192000	561	291000
11	107000	92	26700	156000	141	59100	198000	467	250000
12	108000	92	26700	154000	129	53600	207000	360	200000
13	106000	90	25800	149000	145	58700	212000	280	160000
14	108000	92	26700	147000	127	50600	205000	274	151000
15	108000	86	25000	147000	129	51000	197000	281	149000
16	109000	82	24200	149000	114	45900	205000	336	186000
17	105000	94	26800	148000	122	48700	209000	300	170000
18	103000	83	23100	142000	131	50100	207000	294	164000
19	103000	78	21500	137000	134	49600	209000	270	152000
20	99500	79	21300	146000	141	55600	230000	249	154000
21	99500	76	20300	147000	126	50000	231000	228	142000
22	97900	80	21100	140000	143	54100	222000	200	120000
23	95800	87	22500	140000	140	52900	220000	189	112000
24	103000	117	32600	151000	122	49700	213000	171	98400
25	104000	125	35300	160000	130	56500	213000	166	95500
26	108000	99	28600	170000	145	66500	247000	210	140000
27	105000	86	24400	173000	145	67600	242000	228	149000
28	103000	73	20500	164000	159	70200	226000	186	114000
29	103000	72	20100	---	---	---	220000	172	102000
30	106000	72	20600	---	---	---	223000	178	107000
31	117000	88	28500	---	---	---	220000	174	103000

## MISSISSIPPI RIVER MAIN STEM

07022000 MISSISSIPPI RIVER AT THEBES, IL--Continued  
(National Stream-Quality Accounting Network)  
SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)	MEAN DISCHARGE (cfs)	MEAN CONCEN- TRATION (mg/L)	SEDIMENT DISCHARGE (tons/day)
APRIL			MAY			JUNE			
1	206000	178	99000	439000	639	758000	445000	369	444000
2	192000	171	88900	454000	681	835000	406000	337	370000
3	180000	144	70300	454000	682	835000	375000	308	312000
4	181000	131	63800	441000	587	700000	360000	263	256000
5	182000	126	61600	427000	490	565000	351000	247	235000
6	182000	129	63300	410000	376	416000	339000	224	204000
7	181000	125	61200	401000	333	360000	327000	220	194000
8	183000	133	65500	441000	405	487000	330000	202	180000
9	193000	169	87800	508000	686	944000	342000	222	205000
10	201000	170	92200	564000	891	1360000	353000	236	225000
11	221000	180	108000	606000	987	1610000	363000	253	248000
12	239000	231	149000	640000	766	1320000	378000	302	309000
13	243000	240	158000	704000	675	1280000	402000	447	486000
14	247000	276	184000	749000	601	1210000	420000	550	623000
15	245000	271	179000	757000	546	1120000	441000	570	679000
16	234000	228	144000	771000	588	1220000	453000	641	785000
17	224000	203	123000	814000	562	1240000	453000	661	808000
18	225000	183	111000	828000	534	1190000	444000	582	698000
19	228000	194	119000	807000	490	1070000	427000	431	497000
20	233000	214	134000	775000	407	852000	405000	368	402000
21	248000	214	143000	738000	357	712000	378000	329	336000
22	275000	243	181000	692000	318	594000	347000	276	259000
23	318000	366	315000	649000	299	525000	320000	258	223000
24	340000	457	421000	606000	269	440000	301000	264	214000
25	344000	473	440000	559000	274	413000	287000	248	191000
26	353000	478	456000	520000	266	373000	280000	216	161000
27	352000	472	449000	494000	267	356000	271000	197	144000
28	356000	509	490000	482000	266	347000	262000	172	122000
29	373000	586	591000	487000	287	378000	255000	155	106000
30	408000	600	661000	486000	372	488000	249000	145	97600
31	---	---	---	472000	403	513000	---	---	---
JULY			AUGUST			SEPTEMBER			
1	246000	138	91900	149000	85	33900	186000	127	63900
2	240000	141	91100	147000	81	32000	179000	111	53500
3	232000	145	90800	143000	85	32600	170000	103	47000
4	227000	129	78800	136000	89	32700	162000	110	48100
5	222000	127	76200	130000	101	35400	153000	110	45600
6	219000	134	79400	128000	111	38200	144000	116	45000
7	214000	133	76900	125000	118	39800	134000	121	43700
8	209000	129	72600	125000	149	50100	127000	131	44900
9	204000	129	71000	125000	159	53500	124000	131	43700
10	198000	128	68700	123000	128	42500	122000	110	36400
11	196000	136	72100	118000	108	34400	123000	101	33300
12	193000	142	73800	120000	103	33200	121000	96	31300
13	194000	125	65600	122000	127	41800	121000	94	30600
14	196000	121	63900	125000	150	50900	125000	111	37400
15	194000	111	57600	128000	117	40300	126000	120	40700
16	186000	104	52100	133000	102	36400	126000	96	32800
17	177000	99	47500	135000	109	39900	126000	104	35300
18	165000	105	46600	136000	113	41500	126000	123	41700
19	159000	101	43400	139000	118	44000	127000	121	41600
20	157000	95	40200	136000	107	39000	126000	116	39400
21	153000	97	40200	144000	128	49400	131000	106	37400
22	155000	90	37600	156000	91	38200	131000	105	37100
23	161000	85	37000	158000	104	44200	123000	122	40500
24	160000	84	36400	157000	110	46600	116000	94	29400
25	159000	89	38500	171000	117	54100	115000	102	31400
26	157000	83	35100	206000	156	86800	114000	82	25300
27	155000	75	31300	218000	174	103000	110000	83	24600
28	150000	78	31700	213000	185	107000	104000	90	25500
29	147000	78	30900	205000	187	103000	98800	91	24400
30	144000	92	35700	195000	170	89400	96200	97	25200
31	144000	108	42000	189000	148	75500	---	---	---

e Estimated

## ST. FRANCIS RIVER BASIN

377

07035800 ST. FRANCIS RIVER NEAR MILL CREEK, MO

LOCATION.--Lat 37°30'09", long 90°27'28", in NE ¼ sec.35, T.33 N., R.5 E., Madison County, Hydrologic Unit 08020202, on downstream side of Highway E bridge, 8.7 mi southwest of Mill Creek, and 2.9 mi downstream from Little St. Francis River.

DRAINAGE AREA.--505 mi<sup>2</sup>.

PERIOD OF RECORD.--February 1987 to September 1997, October 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 556.27 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	11	47	995	196	10100	337	500	942	236	31	19	44
2	9.1	44	535	184	2500	367	447	875	205	26	57	39
3	8.4	40	390	173	1410	640	427	802	183	24	37	34
4	7.6	37	316	163	950	571	375	640	162	26	23	29
5	8.6	32	270	159	701	492	336	527	159	39	17	26
6	9.9	28	380	168	591	455	310	509	175	30	15	34
7	11	27	527	170	529	423	298	947	161	24	13	42
8	11	28	425	163	459	388	4460	27600	137	20	11	40
9	12	27	341	161	408	11200	3010	14200	125	18	14	39
10	13	26	286	162	369	4480	1420	3590	141	18	20	38
11	16	26	252	157	327	1870	922	1660	147	20	22	37
12	30	24	244	151	295	2590	699	4130	153	46	23	31
13	53	22	339	145	271	1750	e1230	39600	232	56	40	21
14	121	22	922	138	248	1190	e6600	6270	212	59	721	16
15	104	22	1330	133	233	928	2290	1910	150	66	244	15
16	106	21	3860	126	220	2070	1370	1250	118	42	118	15
17	80	20	11500	122	206	1430	924	30100	101	30	72	19
18	61	20	3830	120	192	1010	693	8600	85	25	58	24
19	51	20	1700	126	443	3940	593	2260	72	21	64	78
20	44	19	1020	129	3660	7890	594	1270	66	20	1970	104
21	37	19	731	126	1730	2950	961	848	58	20	871	140
22	32	20	600	129	985	1580	937	622	52	18	434	127
23	34	20	530	144	695	1130	629	488	45	29	311	89
24	267	42	444	343	560	890	1060	398	41	49	268	58
25	495	159	380	511	479	1910	2410	337	38	29	236	44
26	260	160	333	444	455	2740	1240	289	35	21	160	40
27	155	126	301	388	402	1570	1260	256	32	17	117	37
28	105	131	279	347	360	1090	2970	354	39	15	90	34
29	80	286	255	320	---	852	1720	801	47	13	72	31
30	64	1790	228	310	---	700	979	381	40	11	60	27
31	55	---	204	4880	---	583	---	285	---	11	52	---
MEAN	75.9	110	1089	354	1064	1936	1389	4927	115	28.2	201	45.1
MAX	495	1790	11500	4880	10100	11200	6600	39600	236	66	1970	140
MIN	7.6	19	204	120	192	337	298	256	32	11	11	15
IN.	0.17	0.24	2.49	0.81	2.19	4.42	3.07	11.2	0.25	0.06	0.46	0.10

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	90.4	771	826	791	845	888	1098	1135	281	95.5	71.3	118
MAX	438	3774	2428	2187	1745	1936	2890	4927	899	200	201	1153	
(WY)	1994	1994	1991	1993	1989	2002	1994	2002	1997	2001	2002	1993	
MIN	12.9	23.9	32.7	141	153	304	159	64.5	16.4	28.2	4.18	11.5	
(WY)	2001	2000	1990	2000	1996	2001	2000	1987	1988	2002	1988	1987	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	342	949	597
HIGHEST ANNUAL MEAN			949
LOWEST ANNUAL MEAN			194
HIGHEST DAILY MEAN	11500	Dec 17	39600
LOWEST DAILY MEAN	7.6	Oct 4	7.6
ANNUAL SEVEN-DAY MINIMUM	9.4	Oct 1	9.4
MAXIMUM PEAK FLOW	---	68600	May 13
MAXIMUM PEAK STAGE	---	26.47	May 13
INSTANTANEOUS LOW FLOW	---	7.2	Oct 4,5
ANNUAL RUNOFF (INCHES)	9.20	25.52	16.05
10 PERCENT EXCEEDS	733	1740	1150
50 PERCENT EXCEEDS	110	168	182
90 PERCENT EXCEEDS	17	20	16

e Estimated

a Discharge determined by indirect measurement.

## ST. FRANCIS RIVER BASIN

07036100 ST. FRANCIS RIVER NEAR SACO, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°23'06", long 90°28'27", in NE ¼ SE ¼ NE ¼ sec.10, T.31 N., R.5 E., Madison County, Hydrologic Unit 08020202, 3.5 mi northwest of Saco, and 1.3 mi downstream from Twelve Mile Creek.

DRAINAGE AREA.--664 mi<sup>2</sup>.

PERIOD OF RECORD--November 1983 to September 1989, November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 13...	1610	ENVIRONMENTAL		96	13.0	122	7.0	252	11.8	120	24.9	14.2	2.21	
JAN 23...	0850	ENVIRONMENTAL		234	13.9	109	7.9	250	3.8	--	--	--	--	
MAR 06...	1315	ENVIRONMENTAL		781	15.3	125	8.2	180	5.8	--	--	--	--	
MAY 15...	1700	ENVIRONMENTAL		2750	8.7	93	7.5	124	17.4	56	12.1	6.23	.79	
JUL 15...	1510	ENVIRONMENTAL		227	8.1	105	7.9	262	27.6	--	--	--	--	
SEP 04...	1430	ENVIRONMENTAL		195	7.1	93	7.5	196	28.5	--	--	--	--	
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, DIS-SOLVED AMMONIA (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 13...	5.03	88	89	109	0	27.3	E.1	10.8	58	124	<.04	.21	<.05	
JAN 23...	--	97	97	119	0	--	--	--	<10	--	<.04	.18	.20	
MAR 06...	--	71	70	85	0	--	--	--	<10	--	<.04	.12	.11	
MAY 15...	2.81	47	46	56	0	2.10	<.1	10.1	15	82	<.04	.27	.29	
JUL 15...	--	118	117	143	0	--	--	--	<40	--	<.04	.17	<.05	
SEP 04...	--	75	76	93	0	--	--	--	<10	--	<.04	.22	E.03	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 13...	<.008	<.06	<.02	<.06	K2	K3	K1	19	21	.6	<.04	<.1	<6	
JAN 23...	<.008	<.06	<.02	<.06	K1	K2	30	--	--	--	--	--	--	
MAR 06...	E.005	<.06	<.02	<.06	<1	K1	K7	--	--	--	--	--	--	
MAY 15...	<.008	<.06	E.01	.07	K180	900	380	123	270	.4	<.04	<.1	<6	
JUL 15...	<.008	<.06	<.02	<.06	K6	K8	55	--	--	--	--	--	--	
SEP 04...	<.008	<.06	.02	<.06	K5	K11	K9	--	--	--	--	--	--	



07036100 ST. FRANCIS RIVER NEAR SACO, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
13...	53	.73	1	11.7	<.01	E.2	--	2
JAN								
23...	--	--	--	--	--	--	--	--
MAR								
06...	--	--	--	--	--	--	--	--
MAY								
15...	166	4.07	19	15.7	<.01	E.2	--	3
JUL								
15...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## ST. FRANCIS RIVER BASIN

07037000 BIG CREEK AT DES ARC, MO

LOCATION.--Lat 37°17'35", long 90°37'45", in SE ¼ sec.8, T.30 N., R.4 E., Iron County, Hydrologic Unit 08020202, at bridge on State Highway 143 at north edge of Des Arc, 420 ft above Black Creek, and 6.0 mi above Pond Creek.

DRAINAGE AREA.--99.6 mi<sup>2</sup>.

PERIOD OF RECORD.--July 1983 to Sept. 30, 1997, Oct. 1, 1998 to current year.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 507.89 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	15	27	303	48	1530	84	267	211	83	21	12	26
2	15	26	174	45	478	84	261	203	72	20	11	25
3	14	25	122	39	286	105	255	192	63	21	11	23
4	14	25	93	36	206	105	248	181	56	25	10	20
5	16	24	74	35	162	101	236	168	61	23	10	18
6	17	22	77	36	137	99	229	164	65	21	9.2	16
7	17	22	92	34	123	97	229	176	53	20	8.1	15
8	17	21	85	34	110	92	1530	5450	49	18	6.9	15
9	16	20	71	35	102	2170	626	2160	52	16	6.3	15
10	19	20	61	36	95	857	355	1280	71	16	5.8	14
11	21	20	51	34	89	457	312	952	75	18	44	14
12	22	19	50	33	85	463	307	1280	75	22	63	13
13	26	19	69	33	82	381	1230	9060	72	23	62	12
14	30	18	184	32	77	347	875	1700	62	23	78	12
15	30	18	268	32	75	332	393	1040	53	21	59	14
16	33	18	809	32	73	361	308	784	53	20	46	16
17	34	18	2210	32	70	351	274	7800	59	18	39	18
18	30	18	838	31	68	330	251	1550	49	19	37	19
19	28	18	460	33	82	620	239	789	43	20	41	20
20	26	18	301	32	515	1660	304	561	39	21	271	27
21	26	17	222	31	287	578	305	432	36	31	202	28
22	25	17	179	32	186	346	284	341	32	27	109	27
23	26	18	147	34	150	312	253	273	29	22	76	24
24	37	33	123	70	127	297	433	224	28	22	98	22
25	48	66	105	127	116	324	399	190	27	20	80	20
26	41	62	90	114	106	421	288	161	26	17	62	19
27	37	58	81	99	93	331	260	139	25	15	50	18
28	34	61	71	88	86	307	261	136	24	14	43	18
29	32	104	65	83	---	299	240	142	23	14	37	19
30	29	628	57	84	---	289	220	113	23	14	31	20
31	28	---	52	953	---	277	---	98	---	12	28	---
MEAN	25.9	49.3	245	78.0	200	415	389	1224	49.3	19.8	53.1	18.9
MAX	48	628	2210	953	1530	2170	1530	9060	83	31	271	28
MIN	14	17	50	31	68	84	220	98	23	12	5.8	12
IN.	0.30	0.55	2.83	0.90	2.09	4.81	4.36	14.2	0.55	0.23	0.61	0.21

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	62.1	218	197	169	189	217	277	242	107	39.5	26.9	30.8
MAX	396	610	632	465	408	415	579	1224	587	175	102	128
(WY)	1985	1986	1988	1993	1999	2002	1994	2002	1985	2001	1985	1993
MIN	16.1	22.5	25.5	37.0	38.5	83.0	45.3	28.9	15.0	11.9	7.67	6.50
(WY)	2001	1996	1990	1984	1996	2001	2000	1987	1988	1991	1983	1983

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	95.8	232	148
HIGHEST ANNUAL MEAN			267
LOWEST ANNUAL MEAN			55.6
HIGHEST DAILY MEAN	3340	Jul 29	9060
LOWEST DAILY MEAN	12	Sep 7	5.8
ANNUAL SEVEN-DAY MINIMUM	14	Sep 28	8.0
MAXIMUM PEAK FLOW	---		25000
MAXIMUM PEAK STAGE	---		13.54
INSTANTANEOUS LOW FLOW	---		5.1
ANNUAL RUNOFF (INCHES)	13.06		31.63
10 PERCENT EXCEEDS	153		408
50 PERCENT EXCEEDS	51		58
90 PERCENT EXCEEDS	18		17

<sup>a</sup> Discharge determined by indirect measurement.

## ST. FRANCIS RIVER BASIN

381

07037300 BIG CREEK AT SAM A. BAKER STATE PARK  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°15'40", long 90°30'23", in SE ¼ NE ¼ SW ¼ sec.21, T.30 N., R.5 E., Wayne County, Hydrologic Unit 08020202, at Bridge 435 on County Highway NN in Sam A. Baker State Park.

DRAINAGE AREA.--189 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 13...	1350	ENVIRONMENTAL	30	10.1	94	7.4	300	11.8	160	32.3	18.3	.55		
JAN 23...	1050	ENVIRONMENTAL	58	12.7	106	7.6	249	6.6	--	--	--	--		
MAR 06...	0900	ENVIRONMENTAL	212	12.8	104	8.0	197	6.1	--	--	--	--		
06...	0905	REPLICATE	--	--	--	--	--	--	--	--	--	--		
MAY 14...	1130	ENVIRONMENTAL	2700	9.5	96	7.5	106	15.3	51	11.0	5.80	.32		
JUL 16...	0910	ENVIRONMENTAL	37	6.8	85	7.8	278	25.6	--	--	--	--		
SEP 04...	1630	ENVIRONMENTAL	36	7.5	98	7.7	289	28.2	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, DIS-SOLVED (mg/L as N) (00631)
NOV 13...	4.11	129	129	158	0	15.7	E.1	12.9	24	160	E.02	<.10	E.03	
JAN 23...	--	115	116	142	0	--	--	--	<10	--	<.04	E.08	.17	
MAR 06...	--	85	84	102	0	--	--	--	<10	--	<.04	<.10	.08	
06...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	.08	
MAY 14...	2.31	52	51	63	0	1.49	<.1	7.1	12	74	<.04	.16	.07	
JUL 16...	--	136	137	167	0	--	--	--	<40	--	<.04	<.10	.05	
SEP 04...	--	127	128	156	0	--	--	--	<10	--	<.04	E.07	.06	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 mm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (mg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (mg/L as Al) (01105)	ARSENIC DIS-SOLVED (mg/L as As) (01000)	CADMIUM DIS-SOLVED (mg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (mg/L as Cd) (01027)	COPPER, DIS-SOLVED (mg/L as Cu) (01040)
NOV 13...	<.008	<.06	<.02	<.06	K1	K3	K1	6	10	.2	<.04	<.1	<6	
JAN 23...	<.008	<.06	<.02	<.06	<1	K3	K1	--	--	--	--	--	--	
MAR 06...	<.008	<.06	<.02	<.06	<1	K6	K4	--	--	--	--	--	--	
06...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--	
MAY 14...	.008	<.06	<.02	<.06	112	172	274	108	345	.2	.11	.2	<6	
JUL 16...	<.008	<.06	<.02	<.06	K5	K16	38	--	--	--	--	--	--	
SEP 04...	<.008	<.06	<.02	<.06	K2	K7	K26	--	--	--	--	--	--	

## ST. FRANCIS RIVER BASIN

07037300 BIG CREEK AT SAM A. BAKER STATE PARK--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
13...	<10	<.08	<1	E3.1	<.01	E.2	4	2
JAN								
23...	--	--	--	--	--	--	--	--
MAR								
06...	--	--	--	--	--	--	--	--
06...	--	--	--	--	--	--	--	--
MAY								
14...	137	1.12	5	9.4	E.01	E.2	--	7
JUL								
16...	--	--	--	--	--	--	--	--
SEP								
04...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07037500 ST. FRANCIS RIVER NEAR PATTERSON, MO

LOCATION.--Lat 37°11'40", long 90°30'12", in NE ¼ sec.16, T.29 N., R.5 E., Wayne County, Hydrologic Unit 08020202, near left bank on downstream side of bridge pier on State Highway 34, 1 mi upstream from Clark Creek, and 3 mi east of Patterson.

DRAINAGE AREA.--956 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1920 to Sept. 30, 1997, Oct. 1, 1998 to current year. Prior to June 1921, monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 732: 1922-23.

GAGE.--Water-stage recorder. Datum of gage is 370.45 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1938, nonrecording gage at site 50 ft upstream at datum 2.00 ft higher; Oct. 1, 1938, to Apr. 12, 1939, nonrecording gage; Apr. 13, 1939, to Sept. 5, 1956, water-stage recorder at site 50 ft upstream at present datum; Sept. 6, 1956, to Sept. 26, 1958, nonrecording gage at present site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineer satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of August 1915 reached a stage of 33.8 ft, present datum, from floodmarks, discharge, 100,000 ft<sup>3</sup>/s, from rating curve extended above 55,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	52	171	3610	528	19800	915	1490	2060	e783	125	72	174
2	50	157	2050	479	8140	898	1330	1900	e682	125	62	158
3	49	147	1420	446	3660	1100	1210	1750	e615	117	58	144
4	47	139	1120	416	2560	1410	1110	1560	e564	113	57	132
5	52	131	934	387	1980	1290	995	1340	e545	112	80	122
6	57	124	872	391	1660	1180	902	1190	e542	110	82	112
7	56	119	1060	383	1480	1090	837	1360	e531	97	66	103
8	53	113	1210	373	1330	1020	4170	21300	e519	96	53	97
9	50	107	1030	360	1190	11300	8190	43400	e497	91	44	95
10	57	104	886	346	1070	16100	3790	13700	e531	88	38	98
11	151	102	776	331	964	4930	2490	5450	e497	109	34	94
12	139	99	728	316	866	4160	2020	4030	e510	185	51	90
13	155	97	832	305	781	4120	4930	56200	e525	133	115	88
14	208	95	1290	292	710	2930	7910	e34500	e559	113	209	85
15	244	93	2690	279	644	2500	7510	e16000	e490	117	560	86
16	275	90	4140	267	593	3570	3660	e5790	e420	126	382	87
17	253	89	18900	259	547	3720	2520	e45500	e370	129	267	84
18	232	89	14000	252	503	2600	1980	e31600	321	122	260	84
19	202	89	4710	261	641	3710	1700	e13400	281	113	186	83
20	175	87	2950	256	4440	14400	2360	e5320	251	108	272	130
21	155	84	2160	254	4680	8480	2610	e3330	227	124	2960	157
22	143	83	1760	252	2730	4080	2720	e2130	210	121	1340	179
23	134	83	1520	270	1980	2840	2130	e1780	195	109	696	175
24	141	133	1330	644	1610	2290	4260	e1530	179	91	714	166
25	168	211	1160	1180	1390	2710	5590	e1350	170	82	515	149
26	654	237	1020	1320	1250	6960	3880	e1210	157	78	436	130
27	507	388	901	1160	1140	4350	2660	e1180	145	92	361	116
28	351	472	810	1040	1010	2960	3190	e1330	140	87	298	107
29	274	814	735	938	---	2330	3930	e1660	134	71	251	101
30	225	2980	662	871	---	1970	2480	e1260	128	79	219	95
31	193	---	594	2270	---	1710	---	e990	---	86	194	---
MEAN	178	258	2512	552	2477	3988	3152	10490	391	108	353	117
MAX	654	2980	18900	2270	19800	16100	8190	56200	783	185	2960	179
MIN	47	83	594	252	503	898	837	990	128	71	34	83
IN.	0.21	0.30	3.03	0.67	2.70	4.81	3.68	12.6	0.46	0.13	0.43	0.14

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	354	1021	1322	1456	1587	2129	2370	1823	905	325	213	241
MAX	3391	6214	12380	6725	4577	6981	9221	10490	8724	2513	1478	2103	
(WY)	1985	1994	1983	1950	1951	1945	1927	2002	1928	1957	1985	1965	
MIN	29.0	48.1	60.9	64.9	125	178	287	139	33.6	21.3	11.2	14.8	
(WY)	1954	1954	1954	1956	1963	1941	1981	1930	1936	1936	1936	1955	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		FOR PERIOD OF RECORD	
ANNUAL MEAN	757		2056		1143	
HIGHEST ANNUAL MEAN					2731	
LOWEST ANNUAL MEAN					343	
HIGHEST DAILY MEAN	18900	Dec 17	56200	May 13	107000	Dec 4 1982
LOWEST DAILY MEAN	47	Oct 4	34	Aug 11	8.0	Aug 28 1936
ANNUAL SEVEN-DAY MINIMUM	51	Sep 29	52	Oct 1	8.4	Aug 26 1936
MAXIMUM PEAK FLOW	---		77500	May 13	155000 <sup>a</sup>	Dec 3 1982
MAXIMUM PEAK STAGE	---		31.06	May 13	35.77	Dec 3 1982
INSTANTANEOUS LOW FLOW	---		31	Aug 11,12	8.0	Aug 28 1936
ANNUAL RUNOFF (INCHES)	10.75		29.20		16.24	
10 PERCENT EXCEEDS	1640		4100		2330	
50 PERCENT EXCEEDS	246		497		340	
90 PERCENT EXCEEDS	73		87		54	

e Estimated

a Discharge determined by indirect measurement.

## ST. FRANCIS RIVER BASIN

07039000 WAPPAPELLO LAKE AT WAPPAPELLO, MO

LOCATION.--Lat 36°55'42", long 90°17'04", in NW ¼ SE ¼ sec.3, T.26 N., R.7 E., Wayne County, Hydrologic Unit 08020202, at intake tower at dam on St. Francis River, 0.8 mi southwest of Wappapello, and at mile 309.

DRAINAGE AREA.--1,310 mi<sup>2</sup>, approximately.

PERIOD OF RECORD.--April 1941 to current year.

GAGE.--Datum of gage is National Geodetic Vertical Datum of 1929. Prior to June 19, 1941, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by earthfill type dam. Closure of channel at dam began July 10, 1940; river began to flow through outlet structure July 24, 1940. Stop logs placed in outlet structure and storage began Apr. 1, 1941; conservation pool level reached Apr. 20, 1941. Capacity at bottom of outlet tunnels (elevation, 339.0 ft), 2,600 ac-ft; at conservation pool level (elevation, 355.0 ft), 30,900 ac-ft; at spillway crest (elevation, 395.0 ft), 613,000 ac-ft; at maximum pool level (elevation, 410.4 ft), uncontrollable above spillway crest, 1,022,000 ac-ft. Lake is used for flood control, power and recreational purposes. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 729,800 ac-ft, Apr. 16, 1945, elevation, 399.35 ft; minimum, since initial filling to conservation pool level, 23,340 ac-ft, Mar. 1-3, 1970; elevation, 352.20 ft, Sept. 26-27, 1967.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 600,000 ac-ft, May 19, elevation, 395.13 ft; minimum, 27,000 ac-ft, Mar. 5, elevation, 353.96 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	359.91	359.75	361.10	361.98	358.38	354.76	361.52	367.07	386.10	364.51	359.72	359.76
2	359.91	359.77	361.43	361.13	362.59	354.41	360.69	366.97	385.22	363.99	359.73	359.79
3	359.90	359.79	361.30	360.32	363.25	354.33	359.96	366.80	384.26	363.49	359.74	359.81
4	359.90	359.78	361.02	359.60	363.02	354.03	359.18	366.62	383.36	362.99	359.74	359.84
5	359.93	359.76	360.71	358.92	362.51	353.96	358.52	366.33	382.37	362.53	359.73	359.86
6	360.02	359.75	360.37	358.42	361.96	354.55	358.03	365.98	381.47	362.06	359.72	359.86
7	360.02	359.74	360.17	357.99	361.37	355.05	357.56	365.62	380.42	361.59	359.71	359.85
8	360.01	359.73	360.11	357.51	360.75	355.53	357.29	367.05	379.38	361.17	359.70	359.86
9	360.01	359.72	360.00	357.10	360.11	355.99	358.56	372.44	378.28	360.75	359.67	359.87
10	359.99	359.69	359.92	356.71	359.54	359.96	360.09	378.21	377.20	360.37	359.65	359.87
11	360.22	359.71	359.81	356.32	358.92	362.75	360.33	378.85	376.18	360.16	359.64	359.88
12	360.29	359.73	359.74	355.99	358.36	362.78	360.29	378.66	375.18	360.04	359.62	359.87
13	360.27	359.74	359.74	355.76	357.81	362.60	360.42	379.77	374.27	359.92	359.68	359.85
14	360.38	359.75	359.87	355.58	357.28	362.32	361.91	386.77	373.36	359.75	360.14	359.83
15	360.38	359.77	359.99	355.42	356.77	361.80	364.20	388.88	372.58	359.72	360.09	359.86
16	360.36	359.80	360.50	355.21	356.30	361.57	365.22	388.49	371.93	359.72	360.07	359.88
17	360.29	359.83	363.40	355.09	355.87	361.49	365.34	388.64	371.39	359.71	360.02	359.84
18	360.21	359.85	367.57	355.01	355.49	361.29	365.21	393.28	370.88	359.72	359.96	359.82
19	360.14	359.87	369.33	355.01	355.08	361.07	364.92	395.13	370.37	359.72	359.88	359.77
20	360.10	359.91	369.32	354.98	355.39	362.54	364.77	394.84	369.84	359.71	359.78	359.98
21	360.02	359.88	369.05	354.96	356.35	365.15	364.88	394.36	369.39	359.72	359.71	360.07
22	359.99	359.85	368.60	354.91	356.88	365.72	364.88	393.76	368.90	359.72	359.78	360.06
23	359.93	359.83	368.17	354.88	356.84	365.20	364.79	393.10	368.41	359.72	359.69	359.99
24	359.90	359.83	367.65	355.73	356.63	364.49	364.61	392.41	367.90	359.72	359.91	359.94
25	359.92	359.85	367.04	356.06	356.32	363.77	365.89	391.69	367.44	359.72	359.97	359.89
26	359.90	359.86	366.43	356.15	356.08	364.31	366.61	390.95	366.93	359.72	359.92	359.83
27	359.83	359.97	365.79	356.21	355.63	364.87	366.79	390.15	366.43	359.72	359.84	359.78
28	359.72	360.06	365.08	356.20	355.13	364.58	366.81	389.35	366.05	359.72	359.76	359.74
29	359.73	360.12	364.43	356.12	---	363.92	366.95	388.59	365.55	359.71	359.75	359.73
30	359.74	360.43	363.64	356.08	---	363.18	367.08	387.80	365.03	359.72	359.75	359.76
31	359.74	---	362.82	356.01	---	362.37	---	386.97	---	359.72	359.75	---
MEAN	360.02	359.84	363.36	356.69	358.24	360.66	362.78	382.44	373.87	360.60	359.80	359.86
MAX	360.38	360.43	369.33	361.98	363.25	365.72	367.08	395.13	386.10	364.51	360.14	360.07
MIN	359.72	359.69	359.74	354.88	355.08	353.96	357.29	365.62	365.03	359.71	359.62	359.73

## 07039000 WAPPAPELLO LAKE AT WAPPAPELLO, MO--Continued

RESERVOIR STORAGE, (ACRE-FEET), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 0800

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	62100	60900	72300	80300	51000	30000	76100	132000	421000	105000	60700	61000
2	62100	61100	75300	72600	86000	28700	68700	131000	405000	99500	60800	61200
3	62000	61200	74100	65600	92300	28400	62500	129000	389000	94700	60800	61400
4	62000	61100	71600	59800	90100	27200	56600	127000	374000	89800	60800	61600
5	62300	61000	68900	54700	85300	27000	51900	124000	357000	85500	60800	61700
6	63000	60900	66000	51200	80100	29200	48500	120000	341000	81100	60700	61700
7	63000	60800	64300	48200	74800	31100	45400	116000	323000	76800	60600	61700
8	62900	60800	63700	45100	69200	33500	43700	132000	305000	72900	60600	61700
9	62900	60700	62800	42500	63700	35800	52200	198000	287000	69200	60300	61800
10	62700	60500	62200	40100	59400	62500	63600	286000	270000	66000	60200	61800
11	64700	60600	61400	37800	54700	87600	65600	297000	253000	64200	60100	61900
12	65300	60800	60800	35800	50800	87800	65300	293000	238000	63100	59900	61800
13	65100	60800	60800	34700	47100	86100	66400	312000	224000	62200	60400	61700
14	66100	60900	61800	33800	43600	83500	79700	432000	211000	60900	64000	61500
15	66100	61100	62700	33000	40400	78700	102000	468000	200000	60700	63600	61700
16	65900	61300	67100	31900	37700	76600	112000	462000	191000	60700	63400	61900
17	65300	61500	93800	31300	35200	75900	113000	464000	184000	60600	63000	61600
18	64600	61700	137000	31000	33300	74000	112000	559000	177000	60700	62500	61500
19	64000	61800	158000	31000	31300	72000	109000	600000	171000	60700	61900	61100
20	63700	62100	158000	30800	32900	85600	107000	594000	164000	60600	61100	62700
21	63000	61900	155000	30700	38000	111000	108000	583000	159000	60700	60600	63400
22	62700	61700	149000	30600	41100	117000	108000	570000	153000	60700	61100	63300
23	62300	61500	144000	30400	40900	112000	108000	556000	147000	60700	60500	62700
24	62000	61500	138000	34600	39600	104000	106000	540000	141000	60700	62100	62400
25	62200	61700	131000	36300	37800	97400	119000	525000	136000	60700	62600	62000
26	62000	61700	125000	36800	36400	103000	127000	508000	130000	60700	62200	61500
27	61500	62600	118000	37100	34100	108000	129000	491000	125000	60700	61600	61100
28	60700	63300	110000	37100	31600	105000	129000	476000	121000	60700	61000	60800
29	60800	63800	104000	36600	---	98800	130000	463000	115000	60600	60900	60800
30	60800	66500	96100	36400	---	91600	132000	450000	110000	60700	60900	61000
31	60800	---	88200	36000	---	84000	---	436000	---	60700	60900	---
MEAN	63100	61600	95500	41100	52100	73300	89900	373000	227000	68500	61300	61700
MAX	66100	66500	158000	80300	92300	117000	132000	600000	421000	105000	64000	63400
MIN	60700	60500	60800	30400	31300	27000	43700	116000	110000	60600	59900	60800

## ST. FRANCIS RIVER BASIN

07039500 ST. FRANCIS RIVER AT WAPPAPELLO, MO

LOCATION.--Lat 36°55'41", long 90°15'55", in NW ¼ SE ¼ sec.2, T.26 N., R.7 E., Butler County, Hydrologic Unit 08020202, on right bank at downstream side of highway bridge, 0.5 mi southeast of Wappapello, and 1.25 mi downstream from Wappapello Dam.

DRAINAGE AREA.--1,311 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1940 to Sept. 30, 1997, Oct. 1, 1998 to current year. Since January 1939 in reports of the Mississippi River Commission. Gage-height records collected in this vicinity since April 1920 in reports of the U.S. Army Corps of Engineers.

REVISED RECORDS.--WSP 1211: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 315.15 ft (revised) above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1984, at datum 10.00 ft higher at present site. Prior to Oct. 14, 1940, nonrecording gage at same site.

REMARKS.--Records good. Flow completely regulated by Wappapello Lake (07039000), 1.25 mi upstream. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage since 1920, 30.7 ft, former datum, May 15, 1933, discharge 82,500 ft<sup>3</sup>/s, determined by the U.S. Army Corps of Engineers. Maximum discharge, as determined by the U.S. Army Corps of Engineers, 85,000 ft<sup>3</sup>/s, Aug. 1915, stage unknown.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	72	246	1480	4660	2360	2240	6310	3820	9850	3130	125	163
2	71	248	2150	4420	4560	1880	5770	3820	9830	2990	125	157
3	71	247	2470	3980	5520	1690	5210	3800	9830	2880	124	157
4	71	247	2500	3600	5590	1910	4580	3800	9780	2720	123	156
5	75	246	2480	3100	5360	1020	3900	3770	9810	2570	123	154
6	72	246	2290	2670	5070	83	3280	3740	9810	2500	123	153
7	71	246	1900	2350	4770	44	2800	3730	9770	2370	122	153
8	70	246	1780	2100	4460	196	2530	3960	9700	2120	121	153
9	71	246	1620	1950	4160	1260	2780	4300	9690	1930	120	152
10	72	215	1420	1820	3870	3430	3310	5220	9550	1660	119	150
11	76	94	1250	1660	3580	5310	3400	6520	9040	1390	119	149
12	179	85	1070	1410	3300	5860	3410	6830	8550	1130	97	148
13	371	84	1010	1170	3050	5990	3430	7670	8010	1030	54	147
14	380	84	1090	982	2770	5970	3810	9070	7370	769	270	147
15	377	84	1520	905	2510	5830	4060	9780	6390	335	650	148
16	441	81	1900	848	2270	5620	4140	9770	5390	287	680	216
17	520	81	2470	726	2030	5430	4200	9900	4590	266	679	310
18	524	81	2710	594	1800	5350	4190	9730	4130	263	676	314
19	524	82	4000	523	1660	5420	4120	9910	4010	261	671	320
20	518	150	4920	515	2150	6220	3940	9900	3900	258	724	341
21	462	240	5020	512	3300	7370	3910	9870	3730	256	1190	381
22	383	244	5010	486	3630	7770	3900	9870	3580	280	1540	449
23	380	245	4970	517	3310	7840	3880	9900	3520	204	1090	451
24	384	249	4910	1060	3040	7670	3850	9890	3480	133	769	448
25	382	247	4830	1240	2870	7480	3880	9870	3450	128	784	446
26	507	248	4760	1500	2730	7740	3810	9900	3370	125	851	445
27	752	250	4770	1520	2670	7830	3800	9910	3320	124	815	388
28	571	374	4810	1510	2530	7760	3820	9880	3340	124	636	267
29	260	823	4730	1500	---	7580	3810	9890	3260	125	338	119
30	242	1130	4720	1500	---	7280	3820	9890	3210	128	311	68
31	244	---	4760	1590	---	6810	---	9860	---	125	261	---
MEAN	296	246	3075	1707	3390	4964	3922	7670	6442	1052	466	242
MAX	752	1130	5020	4660	5590	7840	6310	9910	9850	3130	1540	451
MIN	70	81	1010	486	1660	44	2530	3730	3210	124	54	68
IN.	0.26	0.21	2.70	1.50	2.69	4.37	3.34	6.75	5.48	0.93	0.41	0.21

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	415	938	2022	2352	2364	2749	2877	2564	1507	714	381	382
MAX	3239	4959	8897	8867	7796	7072	11920	9243	6442	4866	3385	2239	
(WY)	1950	1952	1983	1950	1949	1979	1945	1983	2002	1945	1945	1982	
MIN	33.9	43.8	167	188	286	474	63.5	62.3	6.00	87.1	40.0	34.0	
(WY)	1949	1954	1990	1981	1963	1981	1981	1987	1978	1980	1965	1955	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR FOR PERIOD OF RECORD<sup>a</sup>

	ANNUAL MEAN	914	2785	1602
HIGHEST ANNUAL MEAN				3534
LOWEST ANNUAL MEAN				579
HIGHEST DAILY MEAN	5570	Feb 28	9910	May 19, 27
LOWEST DAILY MEAN	70	Sep 5, Oct 8	44	Mar 7
ANNUAL SEVEN-DAY MINIMUM	71	Aug 31	72	Oct 2
MAXIMUM PEAK FLOW	---		9990	May 17
MAXIMUM PEAK STAGE	---		31.44	May 17
INSTANTANEOUS LOW FLOW	---		41	Mar 6
ANNUAL RUNOFF (INCHES)	9.47		28.85	16.60
10 PERCENT EXCEEDS	2560		7700	4110
50 PERCENT EXCEEDS	370		1820	687
90 PERCENT EXCEEDS	79		124	43

<sup>a</sup> Post-regulation period, water years 1942-1977 and 1999-2002.



07042450 ST. JOHNS DITCH NEAR HENDERSON MOUND, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°40'26", long 89°28'30", in NE ¼ NE ¼ NW ¼ sec.6, T.23 N., R.15 E., Madrid County, Hydrologic Unit 08020204, located approximately 2.5 mi east of Interstate 55 on State Highway P, 4.0 mi south of Henderson Mound.

DRAINAGE AREA.--313 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)		
OCT 23...	1430	ENVIRONMENTAL	201	7.0	79	7.2	249	20.0	--	--	--	--		
NOV 07...	0830	ENVIRONMENTAL	158	8.3	76	7.5	260	11.7	120	37.1	7.13	1.07		
DEC 05...	0930	ENVIRONMENTAL	564	8.0	76	7.2	241	13.1	--	--	--	--		
05...	0931	REPLICATE	--	--	--	--	--	--	--	--	--	--		
JAN 16...	1250	ENVIRONMENTAL	487	9.8	85	7.8	247	9.0	120	36.1	6.76	1.03		
FEB 06...	0900	ENVIRONMENTAL	1160	9.8	81	7.0	200	7.0	--	--	--	--		
MAR 20...	1640	ENVIRONMENTAL	2150	9.7	91	7.0	141	12.0	--	--	--	--		
APR 16...	1110	ENVIRONMENTAL	915	6.8	78	7.6	226	21.2	--	--	--	--		
MAY 14...	1440	ENVIRONMENTAL	932	6.1	65	7.2	78	18.1	35	10.3	2.12	.91		
JUN 10...	1740	ENVIRONMENTAL	762	4.8	58	7.3	230	23.8	--	--	--	--		
JUL 10...	1035	ENVIRONMENTAL	340	6.5	81	7.8	259	25.9	120	35.6	6.88	1.45		
AUG 21...	0840	ENVIRONMENTAL	146	6.1	73	7.7	263	24.1	--	--	--	--		
21...	0841	REPLICATE	--	6.2	76	7.7	262	25.0	--	--	--	--		
SEP 11...	0810	ENVIRONMENTAL	84	5.2	62	7.7	279	24.0	--	--	--	--		
DATE		SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 23...	--	90	89	109	0	--	--	--	<10	--	<.04	.42	.32	
NOV 07...	6.70	97	97	118	0	8.44	.1	15.9	10	170	<.04	.17	.28	
DEC 05...	--	71	71	87	0	--	--	--	20	--	E.03	.42	.20	
05...	--	--	--	--	--	--	--	--	18	--	E.03	.42	.29	
JAN 16...	5.03	87	87	106	0	9.13	.2	19.5	<10	158	<.04	.19	.24	
FEB 06...	--	64	63	77	0	--	--	--	22	--	<.04	.48	.20	
MAR 20...	--	41	41	50	0	--	--	--	108	--	.05	1.0	.45	
APR 16...	--	72	73	89	0	--	--	--	54	--	.13	.93	.71	
MAY 14...	2.63	29	28	34	0	2.73	E.1	3.8	106	84	.07	1.0	.41	
JUN 10...	--	87	87	106	0	--	--	--	141	--	<.04	1.3	.13	
JUL 10...	5.77	99	99	121	0	8.52	E.1	15.8	51	166	<.04	.33	.35	
AUG 21...	--	96	95	116	0	--	--	--	--	--	<.04	.28	.54	
21...	--	94	96	115	0	--	--	--	--	--	<.04	.27	.50	
SEP 11...	--	108	108	131	0	--	--	--	10	--	<.04	.23	.43	

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## ST. FRANCIS RIVER BASIN

07042450 ST. JOHNS DITCH NEAR HENDERSON MOUND, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 16...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<.004	<.022	<.006	<.011	M	<.004	<.010	<.011	<.02	.008	<.02	<.034	<.02
APR 16...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.041	<.02	<.034	<.02
MAY 14...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.039	<.02	<.034	<.02
JUN 10...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUL 10...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 11...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 23...	--	--	--
NOV 07...	<.005	<.002	<.009
DEC 05...	--	--	--
DEC 05...	--	--	--
JAN 16...	--	--	--
FEB 06...	--	--	--
MAR 20...	<.005	<.002	<.009
APR 16...	<.005	<.002	<.009
MAY 14...	<.005	<.002	<.009
JUN 10...	<.005	<.002	<.009
JUL 10...	<.005	<.002	<.009
AUG 21...	--	--	--
AUG 21...	--	--	--
SEP 11...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## 07043500 LITTLE RIVER DITCH 1 NEAR MOREHOUSE, MO

LOCATION.--Lat 36°50'03", long 89°43'48", in SW ¼ SE ¼ sec.2, T.25 N., R.12 E., Stoddard County, Hydrologic Unit 08020204, on downstream side of second pier right of left abutment of bridge on State Highway 114, 1.5 mi downstream from Little River Ditch 39, and 2.0 mi west of Morehouse.

DRAINAGE AREA.--450 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1945 to September 1991, October 1995 to current year. Prior to January 1946 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 280.76 ft above National Geodetic Vertical Datum of 1929. Prior to Nov. 17, 1949 and from June 11, 1951, to Feb. 22, 1962, nonrecording gage at same datum. Nov. 17, 1949, to June 10, 1951, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of June 1945 reached a stage of 19.85 ft, from floodmark, discharge, 5,830 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	59	101	3070	299	6930	295	751	1780	430	293	89	112
2	60	102	1570	284	5130	300	585	2110	381	212	79	108
3	59	97	924	274	3120	334	504	2600	344	199	70	102
4	58	95	575	265	2320	314	401	2110	315	195	65	95
5	70	95	386	258	1640	290	345	1530	298	169	70	87
6	95	97	414	268	950	274	320	946	324	143	76	82
7	76	96	582	266	722	266	316	943	309	125	68	83
8	67	95	1800	273	580	267	327	5370	281	119	55	84
9	64	93	1180	283	494	573	317	7300	343	122	58	83
10	65	93	662	268	434	1220	308	6830	1570	120	53	82
11	110	94	436	251	384	817	290	5260	1650	214	52	82
12	157	92	439	247	360	539	278	3520	657	289	51	85
13	361	91	767	243	336	467	344	8420	480	714	62	81
14	938	92	2210	247	327	410	2150	9320	392	597	2230	82
15	842	92	2340	238	319	357	3610	8100	334	299	1980	78
16	497	92	4160	223	320	962	2160	5600	307	202	867	75
17	303	92	9800	216	304	1020	1450	7800	303	168	461	82
18	219	92	9670	212	311	667	831	9550	306	150	286	84
19	169	95	8700	227	332	1780	641	8230	283	147	166	108
20	143	91	7140	232	2180	6770	2090	5630	256	132	317	385
21	127	92	4780	235	2020	5300	3510	3640	261	123	349	489
22	120	93	3430	250	1270	3080	2250	2880	244	119	213	373
23	118	95	2920	440	704	2430	1200	2290	218	101	249	242
24	117	108	2080	8390	468	1890	2250	1610	200	98	796	175
25	111	106	1270	7710	399	2150	5220	1130	260	101	695	142
26	105	127	801	4900	363	8250	3420	877	238	94	499	138
27	102	536	642	3140	342	6040	2540	662	206	87	303	135
28	102	1360	554	2480	322	3380	2360	578	931	84	192	120
29	102	3110	448	1900	---	2680	1470	764	976	84	152	104
30	101	4940	355	1450	---	2020	892	580	496	94	132	101
31	100	---	320	2520	---	1220	---	506	---	100	122	---
MEAN	181	415	2401	1242	1192	1818	1438	3821	453	184	350	136
MAX	938	4940	9800	8390	6930	8250	5220	9550	1650	714	2230	489
MIN	58	91	320	212	304	266	278	506	200	84	51	75
IN.	0.46	1.03	6.15	3.18	2.76	4.66	3.57	9.79	1.12	0.47	0.90	0.34

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	169	432	668	791	880	952	872	778	395	268	188	167
MAX	944	2615	2875	4286	3646	2800	2851	3821	1564	817	658	703
(WY)	1985	1958	1983	1950	1989	1979	1979	2002	1989	1957	1985	1975
MIN	30.6	45.4	73.5	72.3	115	106	146	139	88.7	70.9	47.6	27.4
(WY)	1954	2000	1954	1981	1963	1981	1971	2001	1988	1954	1999	1999

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	504	1141	547
HIGHEST ANNUAL MEAN			1261
LOWEST ANNUAL MEAN			134
HIGHEST DAILY MEAN	9800	9800	11700
LOWEST DAILY MEAN	50 Aug 24, 25, 30	51 Aug 12	21 Sep 18 1954
ANNUAL SEVEN-DAY MINIMUM	52 Aug 24	57 Aug 7	24 Sep 13 1954
MAXIMUM PEAK FLOW	---	10300 Dec 17	12000 Feb 15 1989
MAXIMUM PEAK STAGE	---	17.79 Dec 17	19.30 Feb 15 1989
INSTANTANEOUS LOW FLOW	---	48 Aug 12	20 Sep 8 1999
ANNUAL RUNOFF (INCHES)	15.21	34.43	16.52
10 PERCENT EXCEEDS	1220	3240	1310
50 PERCENT EXCEEDS	152	317	204
90 PERCENT EXCEEDS	69	86	78

## ST. FRANCIS RIVER BASIN

07046250 LITTLE RIVER DITCHES NEAR RIVES, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°05'25", long 90°04'47", in SW  $\frac{1}{4}$  SE  $\frac{1}{4}$  SW  $\frac{1}{4}$  sec.28, T.17 N., R.9 E., Dunklin County, Hydrologic Unit 08020204, located at the Little River Ditches bridge chain on State Highway 164. Samples are taken during high flow from the three western most ditches.

PERIOD OF RECORD.--November 1969 to June 1970, August 1972 to September 1973, July 1977 to June 1989, November 1992 to current year.

REMARKS.--Analyses represent a composite of water from five ditches. Bacteria is usually taken from Ditch 66. Published as Little River Ditches near Kennett (07046001) for periods of record from November 1969 to September 1993.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 23...	1115	ENVIRONMENTAL	340	4.3	48	7.4	247	19.6	--	--	--	--
NOV 06...	1015	ENVIRONMENTAL	291	5.5	54	7.5	299	15.0	130	36.6	9.83	7.15
DEC 04...	1400	ENVIRONMENTAL	4590	9.2	81	6.8	109	9.4	--	--	--	--
JAN 15...	0918	ENVIRONMENTAL	983	11.3	94	8.0	343	7.6	160	45.1	11.3	2.03
15...	0919	REPLICATE	--	--	--	--	--	--	160	45.2	11.3	2.35
FEB 05...	0945	ENVIRONMENTAL	5040	9.5	78	7.5	150	7.2	--	--	--	--
MAR 26...	1515	ENVIRONMENTAL	10900	10.6	90	7.4	116	8.1	--	--	--	--
APR 17...	1405	ENVIRONMENTAL	4320	8.3	98	7.3	145	23.0	--	--	--	--
MAY 15...	1055	ENVIRONMENTAL	16800	5.6	60	6.9	80	18.8	30	8.40	2.27	2.22
JUN 11...	1405	ENVIRONMENTAL	6790	4.8	60	7.3	184	25.9	--	--	--	--
JUL 09...	1035	ENVIRONMENTAL	590	5.3	71	8.1	380	30.2	180	48.5	13.1	2.82
AUG 20...	1000	ENVIRONMENTAL	520	4.8	62	7.8	269	28.3	--	--	--	--
SEP 17...	0850	ENVIRONMENTAL	320	5.6	70	8.3	391	25.8	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 23...	--	100	101	123	0	--	--	--	<10	--	.03	.73	.08
NOV 06...	8.98	113	113	138	0	13.9	.1	19.1	38	188	E.03	.64	.14
DEC 04...	--	26	24	30	0	--	--	--	26	--	E.03	.94	E.05
JAN 15...	9.37	135	135	164	0	13.7	.2	22.1	<10	208	<.04	.17	.10
15...	9.19	--	--	--	--	14.4	.2	22.4	<10	212	<.04	.20	.12
FEB 05...	--	50	48	58	0	--	--	--	252	--	.06	1.2	.27
MAR 26...	--	45	43	53	0	--	--	--	584	--	.04	2.4	.49
APR 17...	--	60	61	74	0	--	--	--	130	--	.05	1.2	.56
MAY 15...	2.65	24	25	30	0	3.32	E.1	4.6	162	150	.06	1.5	1.21
JUN 11...	--	93	93	114	0	--	--	--	300	--	<.04	1.8	.82
JUL 09...	11.9	157	157	191	0	14.6	.2	20.0	68	226	<.04	.54	<.05
AUG 20...	--	102	101	124	0	--	--	--	27	--	<.04	.53	.36
SEP 17...	--	152	152	186	0	--	--	--	35	--	<.04	.36	E.02

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]



07046250 LITTLE RIVER DITCHES NEAR RIVES, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	<.002	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
DEC 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 15...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 05...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 26...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.014	<.02	<.034	<.02
APR 17...	<.004	.025	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.861	.02	<.034	<.02
MAY 15...	<.004	.079	<.006	<.011	E.01	<.004	<.010	E.009	<.02	.096	<.02	<.034	<.02
JUN 11...	<.004	.100	<.006	<.011	<.01	<.004	<.010	.396	<.02	.053	<.02	<.034	<.02
JUL 09...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.020	<.02	.013	<.02	<.034	<.02
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 23...	--	--	--
NOV 06...	<.005	<.002	<.009
DEC 04...	--	--	--
JAN 15...	--	--	--
JAN 15...	--	--	--
FEB 05...	--	--	--
MAR 26...	<.005	<.002	E.004
APR 17...	<.005	<.002	<.009
MAY 15...	<.005	<.002	.010
JUN 11...	.026	<.002	.010
JUL 09...	.006	<.002	<.009
AUG 20...	--	--	--
SEP 17...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07050150 ROARING RIVER SPRING NEAR CASSVILLE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°35'30", long 93°50'00", in SE ¼ SE ¼ NE ¼ sec.27, T.22 N., R.27 W., Barry County, Hydrologic Unit 11010001, at outlet of spring in Roaring River State Park.

PERIOD OF RECORD.--November 1993 to current year.

REMARKS.--Previously sampled downstream from spring and published as Roaring River at Roaring River State Park (07050152) November 1991 to October 1993.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
NOV 05...	1205	ENVIRONMENTAL	190	7.2	73	7.4	358	14.6	180	67.1	3.33	1.08
JAN 22...	1315	ENVIRONMENTAL	19	8.6	87	7.4	322	14.0	--	--	--	--
MAR 19...	0745	ENVIRONMENTAL	46	8.1	81	7.3	314	12.8	--	--	--	--
MAY 29...	1005	ENVIRONMENTAL	116	11.6	117	7.3	286	14.0	140	52.6	2.12	.84
JUL 23...	1315	ENVIRONMENTAL	32	7.6	78	7.2	319	14.7	--	--	--	--
SEP 09...	1235	ENVIRONMENTAL	29	7.6	77	7.1	336	14.4	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 05...	4.55	156	155	190	0	8.26	<.1	4.6	14	208	<.04	<.10	3.05
JAN 22...	--	142	141	172	0	--	--	--	<10	--	<.04	<.10	3.57
MAR 19...	--	157	161	197	0	--	--	--	<10	--	<.04	<.10	2.83
MAY 29...	3.40	129	130	158	0	6.50	<.1	3.1	<10	175	<.04	E.06	1.52
JUL 23...	--	142	143	175	0	--	--	--	<10	--	<.04	.11	3.06
SEP 09...	--	148	151	184	0	--	--	--	<10	--	<.04	E.06	3.14

DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 05...	<.008	<.06	E.02	E.03	66	175	75	12	21	E.1	.06	<.1	<6
JAN 22...	<.008	<.06	E.01	<.06	<4	K8	K4	--	--	--	--	--	--
MAR 19...	<.008	E.03	E.02	E.04	K2	K8	K40	--	--	--	--	--	--
MAY 29...	.010	<.06	<.02	<.06	100	145	265	22	46	E.1	.04	<.1	<6
JUL 23...	<.008	<.06	E.02	<.06	K4	K10	K13	--	--	--	--	--	--
SEP 09...	E.004	E.03	.02	E.03	K1	K8	K2	--	--	--	--	--	--

07050150 ROARING RIVER SPRING NEAR CASSVILLE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 05...	<10	<.08	<1	<2.0	<.01	<.3	--	5
JAN 22...	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--
MAY 29...	22	E.06	<1	<2.0	<.01	<.3	--	3
JUL 23...	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07050690 PEARSON CREEK NEAR SPRINGFIELD, MO

LOCATION.--Lat 37°10'41", long 93°11'53", in NW ¼ NE ¼ NW ¼ sec. 35, T.29 N., R.21 W., Greene County, Hydrologic Unit 11010002, 1.4 mi east of Highway 65 and 0.13 mi south of Highway D (Sunshine).

DRAINAGE AREA.--21.0 mi<sup>2</sup>.

PERIOD OF RECORD.--July 21, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage unknown.

REMARKS.--Records fair. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	5.9	8.1	21	13	201	15	45	29	32	7.1	4.1	2.6
2	5.9	16	18	11	120	32	41	26	29	7.2	3.9	2.4
3	5.9	15	14	11	83	40	37	24	27	7.8	4.0	2.1
4	5.9	13	12	9.8	64	40	34	22	25	9.1	3.8	2.0
5	16	11	11	9.4	52	38	31	20	24	8.0	3.6	2.0
6	13	11	9.4	9.1	44	37	29	20	23	7.1	3.6	2.0
7	10	9.3	8.6	8.7	39	35	27	45	21	6.7	3.7	1.7
8	8.9	9.1	7.9	8.3	34	34	40	916	19	6.2	3.5	1.7
9	8.2	8.9	6.9	8.0	31	32	40	393	18	6.6	3.3	1.7
10	26	8.1	6.2	7.6	28	29	39	227	17	20	3.2	1.7
11	33	7.7	5.7	7.3	25	27	37	142	16	24	3.6	1.6
12	24	7.6	15	7.0	23	26	34	107	23	20	3.6	1.6
13	21	7.8	27	6.9	21	24	32	132	20	23	3.6	1.6
14	19	7.2	29	6.6	19	22	30	110	17	15	3.9	1.9
15	17	6.5	31	6.4	18	21	28	92	16	11	3.8	2.2
16	17	5.9	116	6.5	16	20	26	79	15	10	3.6	2.1
17	16	5.8	236	6.3	15	19	24	354	14	9.0	4.5	2.1
18	14	5.6	153	6.3	14	18	23	270	13	9.1	6.3	2.1
19	13	7.7	100	6.3	18	33	22	159	12	9.7	4.8	2.3
20	13	7.4	72	6.4	19	52	53	110	11	9.4	3.9	3.1
21	12	6.3	57	6.5	19	52	74	89	11	9.0	3.3	2.6
22	11	6.1	46	6.3	18	48	61	77	11	7.8	3.2	2.3
23	26	6.6	38	6.7	18	44	52	69	9.9	7.0	4.1	2.1
24	24	11	32	10	17	42	47	67	9.6	6.3	7.4	1.9
25	18	12	28	9.3	17	121	42	56	11	5.8	7.6	1.8
26	15	12	25	9.1	16	99	44	49	11	5.3	5.8	1.8
27	14	11	22	8.6	15	74	40	44	9.4	4.9	4.6	1.7
28	12	13	20	8.3	14	64	36	43	8.8	4.6	3.8	1.6
29	11	18	17	8.1	---	58	33	47	8.1	4.5	3.2	1.5
30	9.7	23	15	21	---	52	30	40	7.7	4.6	2.9	1.5
31	8.8	---	14	210	---	48	---	35	---	4.2	2.6	---
MEAN	14.6	9.92	39.2	15.0	36.4	41.8	37.7	126	16.3	9.36	4.09	1.98
MAX	33	23	236	210	201	121	74	916	32	24	7.6	3.1
MIN	5.9	5.6	5.7	6.3	14	15	22	20	7.7	4.2	2.6	1.5
IN.	0.80	0.53	2.15	0.83	1.80	2.30	2.00	6.90	0.87	0.51	0.22	0.11

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1999 - 2002, BY WATER YEAR (WY)

	1999	2000	2001	2002	1999	2000	2001	2002	1999	2000	2001	2002
MEAN	7.11	6.83	20.1	9.37	32.8	25.6	16.8	46.1	13.1	28.8	7.16	5.73
MAX	14.7	9.92	39.2	15.0	53.2	41.8	37.7	126	16.3	59.6	12.4	15.2
(WY)	2002	2002	2002	2002	2001	2002	2002	2002	2002	2000	2001	2001
MIN	2.70	3.77	3.73	4.39	9.62	11.3	5.20	5.63	10.6	9.35	3.10	1.98
(WY)	2001	2000	2001	2000	2000	2000	2000	2000	2001	2002	1999	2002

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1999 - 2002
ANNUAL MEAN	18.1	29.4	18.5
HIGHEST ANNUAL MEAN			29.4
LOWEST ANNUAL MEAN			12.2
HIGHEST DAILY MEAN	375	916	916
LOWEST DAILY MEAN	2.5	1.5	1.5
ANNUAL SEVEN-DAY MINIMUM	2.9	1.7	1.7
MAXIMUM PEAK FLOW	---	2020	2200
MAXIMUM PEAK STAGE	---	7.36	7.53
INSTANTANEOUS LOW FLOW	---	1.4	1.4
ANNUAL RUNOFF (INCHES)	11.69	19.02	11.95
10 PERCENT EXCEEDS	30	54	37
50 PERCENT EXCEEDS	9.8	14	8.1
90 PERCENT EXCEEDS	5.8	3.3	2.8

07050690 PEARSON CREEK NEAR SPRINGFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2001 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)
OCT 04...	1415	ENVIRONMENTAL	5.9	10.2	113	8.0	501	18.6	--	--	--	--
NOV 07...	1255	ENVIRONMENTAL	9.7	11.0	115	7.8	515	15.7	250	92.6	4.93	1.64
DEC 16...	1430	ENVIRONMENTAL	117	8.8	86	7.6	407	11.8	200	72.5	3.67	2.56
19...	0950	ENVIRONMENTAL	103	11.4	110	7.4	437	12.1	--	--	--	--
JAN 24...	1130	ENVIRONMENTAL	9.7	11.7	105	8.1	506	8.7	240	86.8	4.89	1.45
FEB 20...	0815	ENVIRONMENTAL	19	9.0	86	7.5	470	10.8	--	--	--	--
MAR 20...	1200	ENVIRONMENTAL	55	11.0	107	7.7	428	12.1	--	--	--	--
APR 20...	1725	ENVIRONMENTAL	75	7.2	79	7.4	382	16.8	170	64.9	2.71	1.69
22...	1145	ENVIRONMENTAL	61	11.6	117	7.6	388	14.1	--	--	--	--
MAY 28...	1045	ENVIRONMENTAL	42	11.2	116	7.7	429	15.1	210	76.6	3.72	1.73
JUN 18...	1620	ENVIRONMENTAL	13	9.8	112	7.8	454	19.4	--	--	--	--
JUL 22...	1105	ENVIRONMENTAL	7.9	8.5	98	7.7	487	20.5	250	92.6	4.70	2.11
AUG 20...	1205	ENVIRONMENTAL	4.1	7.2	85	7.9	477	21.7	--	--	--	--
SEP 10...	1425	ENVIRONMENTAL	1.7	8.0	98	7.8	486	23.0	230	82.6	5.74	2.02

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 04...	--	205	205	250	0	--	--	--	<10	--	<.04	.15	1.94
NOV 07...	11.1	196	196	241	0	21.1	E.1	10.6	<10	212	<.04	.12	2.69
DEC 16...	8.16	167	168	205	0	16.9	<.1	8.4	78	222	<.04	.62	2.66
19...	--	181	181	220	0	--	--	--	16	--	<.04	.20	3.46
JAN 24...	13.2	191	192	235	0	29.3	.2	10.7	<10	294	<.04	.11	2.75
FEB 20...	--	193	192	235	0	--	--	--	<10	--	<.04	.12	2.96
MAR 20...	--	190	192	235	0	--	--	--	10	--	<.04	.27	2.72
APR 20...	8.40	154	153	187	0	15.9	<.1	7.9	36	237	E.03	.50	1.91
22...	--	152	153	186	0	--	--	--	<10	--	<.04	.22	2.52
MAY 28...	6.80	183	184	225	0	13.6	<.1	7.8	<10	253	<.04	.12	2.50
JUN 18...	--	196	197	240	0	--	--	--	<10	--	<.04	E.10	2.44
JUL 22...	9.05	200	201	245	0	19.7	E.1	9.2	<10	292	<.04	.19	2.33
AUG 20...	--	187	186	227	0	--	--	--	<10	--	<.04	.27	2.02
SEP 10...	9.67	202	201	246	0	19.2	E.1	9.4	<10	286	<.04	.22	1.31

## WHITE RIVER BASIN

07050690 PEARSON CREEK NEAR SPRINGFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 04...	E.005	E.03	.02	E.04	330	K683	157	--	--	--	--	--	--
NOV 07...	.009	<.06	<.02	E.04	160	252	213	15	32	E.2	E.03	<.1	<6
DEC 16...	<.008	.06	.06	.16	4400	7800	3100	1	677	.3	<.04	.1	<6
19...	.021	E.03	<.02	E.04	360	560	550	--	--	--	--	--	--
JAN 24...	E.004	<.06	<.02	<.06	180	K477	168	28	67	.3	<.04	<.1	<6
FEB 20...	E.005	<.06	<.02	<.06	340	<5	183	--	--	--	--	--	--
MAR 20...	E.005	E.03	<.02	E.05	140	K2120	1000	--	--	--	--	--	--
APR 20...	E.007	E.05	.02	.08	7200	K8660	K16400	5	309	.3	E.02	<.1	<6
22...	.021	<.06	<.02	<.06	K6	K850	326	--	--	--	--	--	--
MAY 28...	.034	<.06	<.02	E.03	1400	K1200	633	5	52	E.1	<.04	<.1	<6
JUN 18...	<.008	E.03	E.01	<.06	240	K340	310	--	--	--	--	--	--
JUL 22...	.014	E.04	E.01	E.05	220	550	320	3	114	.2	E.02	<.1	<6
AUG 20...	E.006	E.04	.03	E.06	200	K1210	1500	--	--	--	--	--	--
SEP 10...	E.006	E.04	.02	E.05	360	K860	410	1	55	.3	<.04	<.1	<6
DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	11	E.05	<1	8.8	<.01	<.3	--	4	--	--	--	--	--
DEC 16...	<10	.09	3	7.7	<.01	E.2	3	13	<.002	<.004	<.002	<.005	E.004
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	15	E.06	M	4.8	<.01	.6	--	3	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	E.003
APR 20...	E5	E.04	2	8.6	E.01	E.2	2	10	<.006	<.006	<.004	<.005	.009
22...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	E.005
MAY 28...	<10	.16	<1	6.1	<.01	E.3	2	3	<.006	<.006	<.004	<.005	E.005
JUN 18...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	<.007
JUL 22...	<10	E.06	1	21.7	<.01	<.3	3	6	<.006	<.006	<.004	<.005	.011
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<10	E.05	M	25.1	<.01	E.2	<1	2	--	--	--	--	--

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	BEN- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	
	OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	<.010	<.002	<.041	<.020	E.003	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	
19...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.002	<.005	<.005	<.02	<.002	<.009	
APR 20...	<.010	.006	E.018	<.020	<.005	<.018	<.003	E.005	.181	<.005	<.02	<.002	<.009	
22...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.004	.023	<.005	<.02	<.002	<.009	
MAY 28...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.005	<.005	<.005	<.02	<.002	<.009	
JUN 18...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	
JUL 22...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	E.006	E.005	<.005	<.02	<.002	<.009	
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--	
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)	
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	
19...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	
APR 20...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	
22...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	
MAY 28...	<.005	<.003	<.004	<.035	<.027	<.050	<.020	<.013	<.006	<.002	<.007	<.003	<.010	
JUN 18...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	
JUL 22...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	--

## WHITE RIVER BASIN

07050690 PEARSON CREEK NEAR SPRINGFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	<.002	<.010	<.006	<.011	.02	<.004	<.010	<.011	<.02	<.011	.02	<.034	<.02
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	E.01	<.034	<.02
APR 20...	<.004	.066	<.006	<.011	.02	<.004	<.010	<.011	<.02	<.005	.02	<.034	<.02
22...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	E.01	<.034	<.02
MAY 28...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	E.01	<.034	<.02
JUN 18...	<.004	<.022	<.006	<.011	.02	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUL 22...	<.004	<.022	<.006	<.011	.02	<.004	<.010	<.011	<.02	<.005	.02	<.034	<.02
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
OCT 04...	--	--	--
NOV 07...	--	--	--
DEC 16...	<.005	<.002	<.009
19...	--	--	--
JAN 24...	--	--	--
FEB 20...	--	--	--
MAR 20...	<.005	<.002	<.009
APR 20...	<.005	<.002	<.009
22...	<.005	<.002	<.009
MAY 28...	<.005	<.002	<.009
JUN 18...	<.005	<.002	<.009
JUL 22...	<.005	<.002	<.009
AUG 20...	--	--	--
SEP 10...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).  
E--Laboratory estimated value.  
M--Presence of material verified, but not quantified.  
<--Numeric result is less than the value shown.



07050700 JAMES RIVER NEAR SPRINGFIELD, MO

LOCATION.--Lat 37°09'00", long 93°12'12", in SW ¼ SE ¼ SW ¼ sec.2, T.28 N., R.21 W., Greene County, Hydrologic Unit 11010002, on right bank on county road at Kinser Bridge, 1.1 mi downstream from Pearson Creek, and 2.5 mi southeast of Springfield.

DRAINAGE AREA.--246 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1955 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,143.27 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Prior to Dec. 19, 1955, nonrecording gage at same site and datum.

REMARKS.--Records fair. Flows are affected by the pumping of Blackman Water Treatment Plant, 1.0 mi upstream. Springfield City Utilities gage-height and U.S.G.S satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of July 1909 reached a stage of about 22 ft, from information by local resident, discharge not determined.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	12	15	87	70	3410	84	241	203	164	47	31	17
2	14	35	85	63	976	407	205	177	149	45	25	17
3	14	32	67	52	653	703	176	155	130	40	28	17
4	13	42	54	47	488	476	151	141	118	43	29	11
5	25	29	46	47	390	373	136	126	133	47	27	14
6	20	32	38	49	321	359	125	115	136	43	25	12
7	18	27	31	40	272	327	119	142	118	42	27	10
8	13	24	30	40	236	286	426	13500	103	39	25	8.2
9	18	21	27	35	206	288	701	5170	96	37	23	9.6
10	32	21	20	34	187	296	516	1960	84	74	22	10
11	50	21	18	31	158	252	392	1040	73	75	23	12
12	30	19	24	33	141	227	316	741	100	45	21	9.0
13	43	21	44	32	122	200	272	1360	128	56	117	9.7
14	41	13	83	27	112	179	289	951	97	52	117	9.5
15	30	19	121	25	102	160	259	642	82	48	58	9.9
16	27	19	854	24	95	150	223	506	73	46	23	9.2
17	26	13	4020	20	89	149	200	6070	68	47	40	7.2
18	20	26	1470	21	80	135	178	3640	71	51	71	8.8
19	29	29	758	25	83	524	161	1280	69	81	45	9.3
20	32	23	522	26	92	1890	329	784	59	94	34	12
21	28	22	407	20	95	768	885	600	53	51	39	11
22	26	16	333	35	90	525	557	468	65	54	26	12
23	34	15	272	29	89	424	410	427	62	49	24	17
24	36	17	224	40	86	352	346	389	59	46	28	15
25	26	9.5	187	99	80	1330	313	354	60	48	37	13
26	27	16	157	105	74	883	293	301	60	45	55	9.3
27	37	22	131	91	67	591	315	263	57	42	35	10
28	23	28	114	81	74	477	294	239	54	39	30	9.4
29	21	31	104	70	---	398	244	242	52	39	18	8.6
30	18	40	89	104	---	333	222	209	49	37	20	7.9
31	16	---	82	2740	---	279	---	181	---	35	16	---
MEAN	25.8	23.2	339	134	317	446	310	1367	87.4	49.6	36.7	11.2
MAX	50	42	4020	2740	3410	1890	885	13500	164	94	117	17
MIN	12	9.5	18	20	67	84	119	115	49	35	16	7.2
IN.	0.12	0.11	1.59	0.63	1.34	2.09	1.41	6.41	0.40	0.23	0.17	0.05

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1956 - 2002, BY WATER YEAR (WY)

MEAN	94.9	246	285	213	280	416	430	407	193	107	37.3	108
MAX	587	1327	1370	881	972	1055	1396	1672	873	1148	262	1566
(WY)	1971	1973	1983	1995	1985	1998	1994	1961	1985	1958	1958	1993
MIN	2.74	9.39	8.26	5.56	8.35	16.4	16.3	27.6	28.1	12.2	3.22	1.05
(WY)	1957	1964	1956	1981	1981	1981	1981	2000	1972	1962	1962	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1956 - 2002	
ANNUAL MEAN	144		263		234	
HIGHEST ANNUAL MEAN					465	
LOWEST ANNUAL MEAN					52.8	
HIGHEST DAILY MEAN	7220	Feb 24	13500	May 8	24500	Sep 25 1993
LOWEST DAILY MEAN	9.5	Nov 25	7.2	Sep 17	0.30	Sep 16 1956
ANNUAL SEVEN-DAY MINIMUM	12	Aug 29	9.0	Sep 12	0.53	Sep 12 1956
MAXIMUM PEAK FLOW	---		21500	May 8	41100	Sep 25 1993
MAXIMUM PEAK STAGE	---		17.34	May 8	19.45	Sep 25 1993
INSTANTANEOUS LOW FLOW	---		4.0	Sep 26	0.10	Sep 16 1956
ANNUAL RUNOFF (INCHES)	7.97		14.54		12.94	
10 PERCENT EXCEEDS	237		481		504	
50 PERCENT EXCEEDS	46		58		74	
90 PERCENT EXCEEDS	16		16		12	

## WHITE RIVER BASIN

07052000 WILSON CREEK AT SPRINGFIELD, MO

LOCATION.--Lat 37°11'12", long 93°19'52", in SE ¼ NE ¼ SE ¼ sec. 28, T.29 N., R.22 W., Greene County, Hydrologic Unit 11010002, 1,600 ft downstream from confluence of Jordan and Fassnight Creeks, at bridge on Scenic Drive in Springfield.

DRAINAGE AREA.--17.8 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1932 to November 1939, June 28, 1973 to Sept. 22, 1977, June 4, 1998 to present.

GAGE.--Water-stage recorder. Datum of gage is 1200.86 ft above National Geodetic Vertical Datum of 1929. May 1932 to January 1939, recorder 0.5 mi downstream and at datum 4.7 ft lower.

REMARKS.--Records fair. U.S.G.S. satellite telemeter at station.

REVISIONS.--The maximum instantaneous discharge for the 1999 water year has been revised to 3,560 ft<sup>3</sup>/s, May 4, 1999. The maximum instantaneous discharge for 2000 water year and the period of record has been revised to 6,750 ft<sup>3</sup>/s, July 12, 2000; the maximum daily discharge for the 2000 water year revised to 1,710 ft<sup>3</sup>/s, July 12, 2000, superseding figures published in WDR MO-99-1 and WDR MO-00-1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.0	6.0	7.4	5.1	33	9.1	9.0	7.8	10	3.1	1.9	1.6
2	3.2	73	5.8	4.9	20	70	8.4	6.7	9.5	6.4	2.8	1.5
3	3.4	8.8	5.4	4.9	16	12	7.8	6.2	8.9	17	1.7	1.5
4	3.8	6.5	5.1	4.9	13	9.4	7.6	5.7	8.7	2.9	1.6	1.3
5	96	6.1	4.8	4.6	12	9.4	7.2	5.2	15	2.2	1.6	1.3
6	8.9	5.6	4.7	4.5	12	8.9	6.9	6.3	8.9	2.1	1.6	1.3
7	4.9	5.5	4.2	4.3	11	7.9	24	242	8.0	2.0	1.6	2.0
8	4.2	8.2	3.9	4.1	9.4	7.4	67	878	7.8	2.2	1.6	1.2
9	4.2	5.7	3.6	3.9	9.2	9.7	19	201	7.5	2.1	1.7	0.92
10	108	5.1	3.5	3.8	7.8	7.1	9.2	43	7.2	55	1.7	0.91
11	67	4.8	3.5	3.7	7.3	6.8	8.3	29	7.0	6.8	1.9	0.93
12	13	4.7	68	3.5	6.9	6.5	7.9	91	47	74	1.9	0.93
13	13	4.8	11	3.6	6.6	5.9	7.8	93	10	37	2.0	0.97
14	9.1	4.8	15	3.3	6.6	5.6	8.3	27	4.7	4.6	2.2	3.4
15	14	4.8	28	3.3	6.4	5.9	6.7	21	4.2	3.3	2.1	1.6
16	14	4.8	216	3.1	6.1	5.1	8.6	18	4.0	3.1	2.0	1.1
17	6.9	4.8	96	3.3	5.9	4.9	7.7	300	3.9	3.2	96	1.2
18	6.1	4.8	25	3.3	5.6	14	9.2	46	3.8	15	5.2	1.0
19	5.7	19	17	4.5	41	90	19	28	3.7	13	3.1	23
20	5.3	4.7	14	4.1	15	17	264	23	3.7	4.6	2.8	2.7
21	5.0	4.2	12	3.9	7.1	11	25	20	3.6	3.6	2.7	1.2
22	4.8	3.9	11	3.5	6.1	9.5	14	18	3.7	2.6	2.6	0.97
23	100	3.8	9.4	40	5.8	8.8	11	16	3.5	3.0	32	0.96
24	9.8	13	8.6	12	5.4	8.3	13	57	3.3	2.3	35	0.93
25	6.7	4.3	7.7	4.9	5.4	192	9.2	16	41	2.3	4.8	0.90
26	6.2	4.0	7.1	4.1	5.3	20	39	14	4.8	2.2	2.7	0.84
27	5.8	4.1	7.0	3.7	5.1	15	24	13	3.8	2.1	2.3	0.86
28	5.6	16	6.6	3.5	4.9	14	10	17	10	2.0	2.1	0.91
29	5.6	22	6.3	22	---	12	8.0	38	3.4	2.4	2.0	0.82
30	5.3	16	5.9	93	---	11	12	12	3.3	2.0	1.9	0.81
31	5.4	---	5.5	205	---	9.7	---	11	---	1.9	1.8	---
MEAN	17.9	9.46	20.3	15.4	10.6	20.1	22.6	74.5	8.80	9.23	7.32	1.98
MAX	108	73	216	205	41	192	264	878	47	74	96	23
MIN	3.0	3.8	3.5	3.1	4.9	4.9	6.7	5.2	3.3	1.9	1.6	0.81
IN.	1.06	0.54	1.21	0.91	0.57	1.20	1.30	4.43	0.51	0.55	0.44	0.11

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	13.4	16.5	14.1	18.3	20.3	22.4	24.1	32.1	32.5	20.2	9.93	35.8
MAX	27.7	42.6	29.4	59.7	41.0	57.6	52.9	74.5	119	100	15.9	361	
(WY)	1937	1974	2000	1937	2001	1935	1933	2002	1935	2000	1975	1975	
MIN	5.02	7.45	5.33	4.33	6.30	7.90	4.13	8.84	6.60	5.62	4.37	1.99	
(WY)	2001	1938	2001	2000	1934	1936	2000	1936	1936	1936	1999	2002	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	15.6	18.3	18.8
HIGHEST ANNUAL MEAN			29.9
LOWEST ANNUAL MEAN			8.26
HIGHEST DAILY MEAN	550	Feb 24	2160
LOWEST DAILY MEAN	1.8	Sep 4	0.81
ANNUAL SEVEN-DAY MINIMUM	2.3	Aug 30	0.87
MAXIMUM PEAK FLOW	---		4360 <sup>a</sup>
MAXIMUM PEAK STAGE	---		11.29
INSTANTANEOUS LOW FLOW	---		0.81
ANNUAL RUNOFF (INCHES)	10.94		12.82
10 PERCENT EXCEEDS	32		37
50 PERCENT EXCEEDS	5.7		9.0
90 PERCENT EXCEEDS	3.2		3.4

<sup>a</sup> From rating extended above 600 ft<sup>3</sup>/s by indirect measurement.

07052100 WILSON CREEK NEAR SPRINGFIELD, MO

LOCATION.--Lat 37°10'06", long 93°22'14", in NE ¼ NE ¼ sec. 6, T.28 N., R.22 W., Greene County, Hydrologic Unit 11010002 on right bank just downstream from bridge on County Road 156, 1 mile upstream of Sewage Treatment Plant, and 0.75 mi upstream of South Creek.

DRAINAGE AREA.--31.4 mi<sup>2</sup>.

PERIOD OF RECORD.--Sept. 21, 1972 to Sept. 30, 1982, May 28, 1998 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1149.65 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor except discharges above 5 ft<sup>3</sup>/s, which are fair. U.S.G.S satellite telemeter at station.

REVISIONS.--The maximum instantaneous stages for the water years 1999 and 2000 have been revised to 7.62 ft, May 4, 1999, and 9.49 ft, July 12, 2000. The maximum instantaneous discharge for 2000 water year revised to 5,480 ft<sup>3</sup>/s, and maximum daily discharge revised to 1,200 ft<sup>3</sup>/s on July 12, 2000, superseding figures published in WDR MO-99-1 and WDR MO-00-1.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	1.1	e1.9	86	3.0	7.6	7.9	4.0	e0.00	e0.00	e0.00
2	0.00	92	0.00	e1.7	39	92	6.6	5.9	2.6	e0.00	e0.00	e0.00
3	0.00	6.3	0.00	e1.4	25	16	5.6	5.0	1.4	14	e0.00	e0.00
4	0.00	1.8	0.00	e0.96	17	13	5.1	4.2	0.80	e2.0	e0.00	e0.00
5	114	0.45	0.00	e0.65	13	7.9	4.5	3.5	5.8	e0.02	e0.00	e0.00
6	2.4	0.02	0.00	e0.28	12	7.5	4.0	4.4	1.7	e0.00	e0.00	e0.00
7	0.00	0.00	0.00	e0.16	11	6.4	9.8	182	0.75	e0.00	e0.00	e0.00
8	0.00	0.42	0.00	e0.04	9.3	5.7	94	1810	0.66	e0.00	e0.00	e0.00
9	3.3	0.89	0.00	e0.01	8.5	7.1	32	539	0.60	e0.00	e0.00	e0.00
10	183	0.00	0.00	e0.00	6.9	5.1	7.9	168	0.54	56	e0.00	e0.00
11	40	0.00	0.00	e0.00	6.1	4.6	6.2	90	0.47	9.6	e0.00	e0.00
12	7.9	0.00	84	e0.00	5.7	4.5	5.4	95	56	87	e0.00	e0.00
13	7.3	0.00	11	e0.00	5.1	3.9	4.3	293	5.5	65	e0.00	e0.00
14	3.8	0.00	12	0.00	4.6	3.5	5.4	87	0.47	8.9	e0.00	e0.00
15	13	0.00	11	0.00	4.1	3.2	3.6	47	e0.30	e0.06	e0.00	e0.00
16	5.7	0.00	321	0.00	3.7	2.6	2.9	26	e0.10	e0.01	e0.00	e0.00
17	1.4	0.00	199	0.00	3.2	2.2	5.5	613	e0.04	e0.00	143	e0.00
18	0.21	0.00	53	0.00	2.9	3.0	4.3	160	e0.00	10	7.9	e0.00
19	0.00	6.3	28	0.00	48	123	14	98	e0.00	13	e0.10	9.7
20	0.00	0.00	17	0.00	15	28	362	65	e0.00	3.0	e0.00	e0.10
21	0.00	0.00	13	0.00	5.6	12	61	41	e0.00	e0.04	e0.00	e0.00
22	0.00	0.00	10	0.00	4.2	9.3	22	27	e0.00	e0.00	e0.00	e0.00
23	142	0.00	8.7	33	3.5	8.4	16	18	e0.00	e0.00	41	e0.00
24	9.9	3.2	7.2	23	2.9	7.6	16	125	e0.00	e0.00	54	e0.00
25	3.2	0.00	5.9	4.0	2.5	274	11	31	44	e0.00	3.6	e0.00
26	1.3	0.00	5.3	2.4	2.3	33	51	14	e0.80	e0.00	e0.02	e0.00
27	0.42	0.00	4.7	1.4	2.2	21	31	9.5	e0.06	e0.00	e0.01	e0.00
28	0.01	2.8	4.0	0.89	2.2	16	13	15	2.7	e0.00	e0.00	e0.00
29	0.00	6.4	3.0	18	---	13	8.8	68	e0.04	e0.00	e0.00	e0.00
30	0.00	19	e2.5	128	---	10	11	8.2	e0.00	e0.00	e0.00	e0.00
31	0.00	---	e2.1	324	---	8.8	---	5.6	---	e0.00	e0.00	---
MEAN	17.4	4.65	25.9	17.5	12.6	24.4	27.7	150	4.31	8.66	8.05	0.33
MAX	183	92	321	324	86	274	362	1810	56	87	143	9.7
MIN	0.00	0.00	0.00	0.00	2.2	2.2	2.9	3.5	0.00	0.00	0.00	0.00
IN.	0.57	0.15	0.85	0.57	0.37	0.80	0.88	4.92	0.14	0.28	0.26	0.01

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	15.6	21.7	14.1	12.4	17.6	32.4	29.5	40.5	26.5	18.1	9.20	12.7
MAX	54.6	88.6	34.1	35.4	47.5	74.6	78.1	151	56.6	73.9	23.1	73.0	
(WY)	1973	1973	1974	1982	2001	1975	1979	2002	1981	2000	1978	1977	
MIN	2.04	0.28	0.56	0.36	2.55	1.08	0.050	3.55	4.31	3.17	1.23	0.33	
(WY)	2000	2000	2001	1977	1977	2001	2000	2000	2002	1980	1999	2002	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	12.8	25.4	21.0
HIGHEST ANNUAL MEAN			35.2
LOWEST ANNUAL MEAN			9.43
HIGHEST DAILY MEAN	807 Feb 24	1810 May 8	1810 May 8 2002
LOWEST DAILY MEAN	0.00 Many Days	0.00 Many Days	0.00 Many Years
ANNUAL SEVEN-DAY MINIMUM	0.00 Many Days	0.00 Many Days	0.00 Many Years
MAXIMUM PEAK FLOW	---	4380 <sup>a</sup> May 8	5480 <sup>a</sup> Jul 12 2000
MAXIMUM PEAK STAGE	---	8.98 May 8	9.49 Jul 12 2000
INSTANTANEOUS LOW FLOW	---	0.00 Many Days	0.00 Many Years
ANNUAL RUNOFF (INCHES)	4.94	9.79	8.09
10 PERCENT EXCEEDS	26	53	44
50 PERCENT EXCEEDS	0.00	2.4	7.0
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

<sup>a</sup> From rating extended above 2,800 ft<sup>3</sup>/s by indirect measurement.

## WHITE RIVER BASIN

07052120 SOUTH CREEK NEAR SPRINGFIELD, MO

LOCATION.--Lat 37°09'16", long 93°21'51", Greene County, Hydrologic Unit 11010002, 50 ft downstream of State Highway FF bridge, 0.25 mi west of junction of James River Expressway and Highway FF.

DRAINAGE AREA.--10.5 mi<sup>2</sup>.

PERIOD OF RECORD.--May 29, 1998 to present.

REVISED RECORDS.--WDR MO-01-1: 2000 (M).

GAGE.--Water-stage recorder. Elevation of gage is 1146.00 ft from topographic map.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.00	0.00	0.00	0.00	13	0.00	0.67	0.35	0.00	0.00	0.00	0.00
2	0.00	13	0.00	0.00	7.1	15	0.24	0.00	0.00	0.00	0.00	0.00
3	0.00	0.03	0.00	0.00	4.6	0.34	0.66	0.00	0.00	0.00	0.00	0.00
4	0.00	0.00	0.00	0.00	3.7	0.97	0.21	0.00	0.00	0.00	0.00	0.00
5	20	0.00	0.00	0.00	2.2	0.38	0.00	0.00	e1.8	0.00	0.00	0.00
6	0.00	0.00	0.00	0.00	2.7	0.00	0.00	0.00	e0.00	0.00	0.00	0.00
7	0.00	0.00	0.00	0.00	1.6	0.00	1.0	28	e0.00	0.00	0.00	0.00
8	0.00	0.00	0.00	0.00	0.37	0.00	17	e298	e0.00	0.00	0.00	0.00
9	0.00	0.00	0.00	0.00	0.00	0.00	7.2	65	e0.00	0.00	0.00	0.00
10	30	0.00	0.00	0.00	0.00	0.00	1.3	24	e0.00	28	0.00	0.00
11	5.8	0.00	0.00	0.00	0.00	0.00	0.46	16	e0.00	9.4	0.00	0.00
12	0.00	0.00	11	0.00	0.00	0.00	0.0	16	e26	12	0.00	0.00
13	0.00	0.00	0.69	0.00	0.00	0.00	0.00	45	e1.1	55	0.00	0.00
14	0.00	0.00	0.51	0.00	0.00	0.00	0.00	15	e0.00	14	0.00	0.00
15	0.32	0.00	0.79	0.00	0.00	0.00	0.00	9.4	e0.00	0.00	0.00	0.00
16	0.74	0.00	54	0.00	0.00	0.00	0.00	5.3	e0.00	0.00	0.00	0.00
17	0.00	0.00	29	0.00	0.00	0.00	0.00	69	e0.00	0.00	e525	0.00
18	0.00	0.00	9.5	0.00	0.00	0.00	0.00	23	e0.00	0.87	21	0.00
19	0.00	2.4	6.1	0.00	8.9	21	0.14	14	e0.00	0.00	0.00	0.00
20	0.00	0.00	4.1	0.00	1.4	5.2	40	9.2	e0.00	0.00	0.00	0.00
21	0.00	0.00	2.4	0.00	0.00	1.9	5.7	5.0	e0.00	0.00	0.00	0.00
22	0.00	0.00	0.32	0.00	0.00	0.82	3.8	0.00	e0.00	0.00	0.00	0.00
23	26	0.00	0.00	3.4	0.00	0.07	2.1	0.00	e0.00	0.00	0.00	0.00
24	0.15	0.00	e0.00	3.7	0.00	0.00	3.5	13	e0.00	0.00	0.00	0.00
25	0.00	0.00	e0.00	0.00	0.00	31	0.71	0.66	35	0.00	0.00	0.00
26	0.00	0.00	e0.00	0.00	0.00	6.3	7.8	0.00	2.5	62	0.00	0.00
27	0.00	0.00	e0.00	0.00	0.00	4.9	1.3	0.00	0.00	0.00	0.00	0.00
28	0.00	0.16	0.00	0.00	0.00	3.9	0.18	0.00	9.2	0.00	0.00	0.00
29	0.00	0.24	0.00	0.85	---	1.8	0.00	7.3	0.00	0.00	0.00	0.00
30	0.00	4.2	0.00	21	---	0.84	2.0	0.00	0.00	0.00	0.00	0.00
31	0.00	---	0.00	52	---	0.10	---	0.00	---	0.00	0.00	---
MEAN	2.68	0.67	3.82	2.61	1.63	3.05	3.20	21.4	2.52	5.85	17.6	0.00
MAX	30	13	54	52	13	31	40	298	35	62	525	0.00
MIN	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
IN.	0.29	0.07	0.42	0.29	0.16	0.33	0.34	2.35	0.27	0.64	1.93	0.00

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1998 - 2002, BY WATER YEAR (WY)

	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002	1998	1999	2000	2001	2002
MEAN	1.34	1.12	2.29	1.39	3.02	1.98	2.71	7.42	2.03	8.13	3.94	1.42			
MAX	2.68	1.81	4.52	2.73	4.88	3.95	7.33	21.4	4.50	24.5	17.6	3.10			
(WY)	2002	1999	2000	1999	2001	1999	1999	2002	2000	2000	2002	1998			
MIN	0.00	0.67	0.00	0.00	1.63	0.09	0.14	0.44	0.56	0.70	0.00	0.00			
(WY)	2001	2002	2001	2001	2002	2001	2000	2001	1998	1998	1999	1999			

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1998 - 2002
ANNUAL MEAN	2.08	5.49	3.29
HIGHEST ANNUAL MEAN			5.49
LOWEST ANNUAL MEAN			1.57
HIGHEST DAILY MEAN	139	Jul 29	525
LOWEST DAILY MEAN	0.00	Many Days	0.00
ANNUAL SEVEN-DAY MINIMUM	0.00	At Times	0.00
MAXIMUM PEAK FLOW	---	Unknown	Unknown
MAXIMUM PEAK STAGE	---	9.63	9.63
INSTANTANEOUS LOW FLOW	---	0.00	0.00
ANNUAL RUNOFF (INCHES)	2.68	7.10	4.26
10 PERCENT EXCEEDS	3.1	10	5.4
50 PERCENT EXCEEDS	0.00	0.00	0.00
90 PERCENT EXCEEDS	0.00	0.00	0.00

e Estimated

LOCATION.--Lat 37°09'07", long 93°22'18", in NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  NE  $\frac{1}{4}$  sec.7, T.28 N., R.22 W., Greene County, Hydrologic Unit 11010002, at bridge on Farm Road 168, 2.0 mi southeast of Brookline, approximately 0.25 mi downstream from the Southwest Treatment Plant, and 0.5 mi downstream from South Creek.

WATER-DISCHARGE RECORDS

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Water-discharge records good. Natural flow partially regulated and affected by sewage effluent.

EXTREMES FOR CURRENT YEAR.--For period July 10 to Sept. 30, maximum instantaneous discharge 2,440 ft<sup>3</sup>/s, July 29, gage height 7.26; minimum instantaneous discharge 18 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

[illegible]

## WHITE RIVER BASIN

07052152 WILSON CREEK NEAR BROOKLINE, MO--Continued

LOCATION.--Lat 37°09'07", long 93°22'18", in NW ¼ NE ¼ NE ¼ sec.7, T.28 N., R.22 W., Greene County, Hydrologic Unit 11010002, at bridge on Farm Road 168, 2.0 mi southeast of Brookline, approximately 0.25 mi downstream from the Southwest Treatment Plant, and 0.5 mi downstream from South Creek.

DRAINAGE AREA.--44.6 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--July 10, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Water-discharge records good. Natural flow partially regulated and affected by sewage effluent.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	32	36	43	38	180	48	54	55	52	37	35	28
2	32	96	40	40	114	122	55	54	48	39	36	33
3	33	44	42	40	78	63	53	54	49	40	35	37
4	33	38	41	40	72	58	51	52	48	35	32	36
5	116	41	41	38	69	57	49	45	51	37	35	34
6	39	39	40	36	64	55	52	50	48	33	35	34
7	32	39	39	39	62	55	46	165	47	35	35	38
8	35	39	37	40	68	57	126	2750	46	38	33	34
9	35	38	34	40	62	52	77	736	39	38	33	35
10	149	35	37	39	49	55	61	275	42	80	37	36
11	97	31	38	39	52	49	57	158	42	48	27	35
12	54	36	90	36	51	45	54	125	62	85	34	36
13	47	36	53	35	49	49	53	362	50	105	34	37
14	41	36	53	38	48	54	49	140	49	53	36	35
15	44	36	48	38	47	43	50	98	39	41	38	31
16	45	36	325	39	44	48	49	83	37	41	33	35
17	42	34	286	39	40	44	52	625	41	40	113	37
18	42	32	125	38	44	44	53	235	41	43	42	27
19	40	41	84	37	78	148	56	150	41	46	34	46
20	35	38	72	37	55	82	366	104	39	41	40	44
21	35	37	67	40	51	69	118	81	41	39	38	31
22	37	32	68	40	48	66	81	76	37	39	36	32
23	132	30	61	55	46	64	72	80	33	39	48	34
24	51	33	53	60	44	54	70	127	39	38	55	34
25	48	32	41	45	45	295	68	75	88	39	46	34
26	46	36	46	41	40	93	93	57	45	38	35	34
27	37	36	46	39	39	78	78	55	41	35	37	32
28	34	41	44	42	39	73	59	58	49	34	39	32
29	37	46	41	46	---	70	53	82	39	37	38	29
30	37	56	39	144	---	70	53	58	38	37	34	33
31	37	---	40	376	---	56	---	56	---	37	32	---
MEAN	50.1	39.3	68.2	54.6	59.9	71.5	73.6	230	45.4	44.1	39.2	34.4
MAX	149	96	325	376	180	295	366	2750	88	105	113	46
MIN	32	30	34	35	39	43	46	45	33	33	27	27
IN.	0.52	0.39	0.70	0.56	0.56	0.74	0.73	2.37	0.45	0.45	0.40	0.34

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002	2001	2002
MEAN	50.1	39.3	68.2	54.6	59.9	71.5	73.6	230	45.4	44.1	41.7	39.7
MAX	50.1	39.3	68.2	54.6	59.9	71.5	73.6	230	45.4	44.1	44.3	45.0
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001	2001
MIN	50.1	39.3	68.2	54.6	59.9	71.5	73.6	230	45.4	44.1	39.2	34.4
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## WATER YEARS 2001 - 2002

ANNUAL MEAN	67.8	67.8
HIGHEST ANNUAL MEAN	67.8	2002
LOWEST ANNUAL MEAN	67.8	2002
HIGHEST DAILY MEAN	2750	May 8 2002
LOWEST DAILY MEAN	27 Aug 11, Sep 18	2002
ANNUAL SEVEN-DAY MINIMUM	33	Sep 24 2002
MAXIMUM PEAK FLOW	Unknown	May 8 2002
MAXIMUM PEAK STAGE	10.27	May 8 2002
INSTANTANEOUS LOW FLOW	6.1	Sep 18 2002
ANNUAL RUNOFF (INCHES)	8.22	8.22
10 PERCENT EXCEEDS	91	91
50 PERCENT EXCEEDS	42	42
90 PERCENT EXCEEDS	34	34

07052152 WILSON CREEK NEAR BROOKLINE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)	
NOV 07...	0855	ENVIRONMENTAL	28	14.5	168	7.5	1030	20.6	230	74.6	10.0	13.7	
JAN 23...	1400	ENVIRONMENTAL	46	17.7	193	7.7	1160	16.9	--	--	--	--	
JAN 23...	1401	REPLICATE	--	--	--	--	--	--	--	--	--	--	
MAR 20...	0750	ENVIRONMENTAL	74	16.8	171	7.5	848	14.2	--	--	--	--	
MAY 28...	1435	ENVIRONMENTAL	65	15.1	169	7.6	737	18.8	230	79.9	6.19	6.50	
JUN 19...	0810	ENVIRONMENTAL	34	12.1	146	7.6	1180	22.3	--	--	--	--	
JUL 22...	1300	ENVIRONMENTAL	44	11.0	141	7.5	1080	25.8	--	--	--	--	
SEP 10...	1310	ENVIRONMENTAL	41	11.2	146	7.8	1170	26.3	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 07...	108	154	155	189	0	136	.6	67.6	12	606	<.04	1.1	13.1
JAN 23...	--	171	170	207	0	--	--	--	<10	--	.08	1.1	17.6
JAN 23...	--	--	--	--	--	--	--	--	--	--	.09	1.2	13.4
MAR 20...	--	169	169	206	0	--	--	--	<10	--	E.04	1.0	4.72
MAY 28...	57.0	175	177	216	0	57.0	.3	44.9	<10	411	.56	1.5	9.36
JUN 19...	--	185	189	230	0	--	--	--	--	--	--	--	--
JUL 22...	--	151	155	189	0	--	--	--	<10	--	<.04	.82	9.31
SEP 10...	--	148	148	180	0	--	--	--	<10	--	<.04	.85	8.19
DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (mg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (mg/L as Al) (01105)	ARSENIC DIS-SOLVED (mg/L as As) (01000)	CADMIUM DIS-SOLVED (mg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (mg/L as Cd) (01027)	COPPER, DIS-SOLVED (mg/L as Cu) (01040)
NOV 07...	E.007	.11	.09	.46	K20	100	K57	28	700	2.9	.15	<.1	E5
JAN 23...	<.008	.18	.16	.40	K34	82	58	--	--	--	--	--	--
JAN 23...	<.008	.22	.21	.44	--	--	--	--	--	--	--	--	--
MAR 20...	<.008	.10	.07	.25	K81	235	304	--	--	--	--	--	--
MAY 28...	.023	.22	.20	.39	130	175	67	8	218	1.1	.04	<.1	<6
JUN 19...	--	--	--	--	<2	K2	K4	--	--	--	--	--	--
JUL 22...	.009	.15	.12	.25	220	600	990	--	--	--	--	--	--
SEP 10...	E.004	.35	.34	.43	K360	480	108	--	--	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]



07052152 WILSON CREEK NEAR BROOKLINE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	HHHMC- BENZO- PYRAN, WATER, FLTRD REC (µg/L) (62075)	INDOLE, WATER, FLTRD REC (µg/L) (62076)	ISOBOR- NEOL, WATER, FLTRD REC (µg/L) (62077)	ISO- PHORONE DISSOLV REC (µg/L) (34409)	ISO- PROPYL BENZENE WATER, FLTRD REC (µg/L) (62078)	ISO- QUIN- OLINE, WATER, FLTRD REC (µg/L) (62079)	MENTHOL WATER, FLTRD REC (µg/L) (62080)	METAL- AXYL WATER FLTRD REC (µg/L) (50359)	METHYL SALICY- LATE, WATER, FLTRD REC (µg/L) (62081)	METO- LACHLOR WATER DISSOLV REC (µg/L) (39415)	DEET, WATER, FLTRD REC (µg/L) (62082)	NAPHTH- ALENE DISSOLV REC (µg/L) (34443)	NONYL- PHENOL, DIETHOX WATER, FLTRD REC (µg/L) (62083)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 28...	E.2	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	.8	<.5	<5
JUN 19...	E.1	<.5	<.5	.5	<.5	<.5	<.5	<.5	<.5	<.5	E.2	<.5	<5
JUL 22...	E.1	<.5	<.5	<.5	<.5	<.5	<.5	<.5	M	<.5	E.1	<.5	<5
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DI- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61705)	MONO- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61706)	PARA- CRESOL, WATER, FLTRD REC (µg/L) (62084)	PARA- NONYL- PHENOL, WATER, FLTRD REC (µg/L) (62085)	PENTA- CHLORO- PHENOL DISSOLV REC (µg/L) (34459)	PHENAN- THRENE DISSOLV REC (µg/L) (34462)	PHENOL WATER FLTRD REC (µg/L) (34466)	PRO- METON, DISS, WATER, REC (µg/L) (04037)	PYRENE DISSOLV REC (µg/L) (34470)	STIGMA- STANOL, WATER, FLTRD REC (µg/L) (62086)	TETRA- CHLORO- ETHY- LENE DISSOLV REC (µg/L) (34476)	FYROL CEF, WATER, FLTRD REC (µg/L) (62087)	FYROL PCF, WATER, FLTRD REC (µg/L) (62088)
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 28...	<1	<1	<1	<5	<2	<.5	1.7	E.1	<.5	<2	M	E.1	E.2
JUN 19...	<1	M	<1	<5	<2	<.5	E.3	<.5	<.5	<2	<.5	E.1	E.2
JUL 22...	<1	<1	<1	<5	<2	<.5	E.4	<.5	<.5	<2	<.5	E.2	E.3
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TRIBUTL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62089)	TRICLO- SAN, WATER, FLTRD REC (µg/L) (62090)	TRI- ETHYL CITRATE WATER, FLTRD REC (µg/L) (62091)	TRIPHNL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62092)	TRIS(2- BUTOXE- PHOS- PHATE, WATER, FLTRD REC (µg/L) (62093)
NOV 07...	--	--	--	--	--
JAN 23...	--	--	--	--	--
MAR 20...	--	--	--	--	--
MAY 28...	E.1	<1	E.1	M	E.1
JUN 19...	E.1	M	E.1	<.5	<.5
JUL 22...	E.1	M	E.1	<.5	<.5
SEP 10...	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07052160 WILSON CREEK NEAR BATTLEFIELD, MO

LOCATION.--Lat 37°07'04", long 93°24'14", in SW ¼ NW ¼ sec.24, T.28 N., R.23 W., Greene County, Hydrologic Unit 11010002, on left bank 50 ft downstream from bridge on Greene County Road 182, 0.3 mi upstream from McElhaney Branch, and 1.8 mi west of Battlefield.

DRAINAGE AREA.--55.0 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--March 1968 to September 1970, October 1972 to September 1982, Aug. 3, 1999 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1,100 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 20, 1972, at site 50 ft upstream. For period 1972 to 1982, at site 250 ft downstream.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. Natural flow partially regulated and affected by sewage effluent. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	50	75	63	422	74	121	136	113	61	49	40
2	48	147	65	64	279	210	114	129	104	63	49	43
3	48	80	63	64	215	122	121	125	101	69	50	46
4	48	63	61	64	182	110	109	121	98	95	46	51
5	178	61	59	60	160	108	104	111	104	e80	47	47
6	88	58	58	56	143	106	105	119	103	e75	48	46
7	62	56	52	59	132	104	102	218	94	e70	48	49
8	58	55	53	60	131	107	246	2730	90	e63	46	46
9	56	55	49	58	119	98	180	1160	80	54	44	46
10	228	51	51	57	99	99	139	594	81	95	50	47
11	202	46	44	56	95	91	128	416	80	112	39	48
12	114	49	147	52	91	87	121	336	129	126	45	47
13	94	49	115	50	87	87	116	638	109	149	46	47
14	85	49	100	52	84	96	111	367	95	128	48	46
15	82	48	86	52	80	83	109	298	78	75	51	46
16	93	48	491	52	76	86	108	261	72	66	47	46
17	76	46	554	51	71	81	116	850	75	62	143	46
18	74	43	323	52	72	79	113	496	75	70	94	37
19	68	61	228	51	131	255	122	358	73	76	58	62
20	61	61	181	51	111	212	495	285	70	78	57	68
21	58	54	153	53	90	170	318	236	72	64	52	46
22	60	47	144	54	82	153	233	209	68	61	49	44
23	184	43	e135	62	77	144	199	196	64	58	83	45
24	103	51	e120	120	74	127	185	258	67	56	91	47
25	78	49	e110	71	74	492	167	195	136	55	80	43
26	69	48	e100	62	69	252	213	152	118	54	55	45
27	57	49	88	58	66	212	187	138	77	50	52	44
28	52	58	80	59	66	189	156	137	91	48	53	45
29	53	71	73	62	---	171	133	187	74	51	51	39
30	52	108	68	233	---	155	136	135	66	52	48	43
31	52	---	67	604	---	132	---	123	---	52	46	---
MEAN	84.8	58.5	129	82.6	121	145	160	378	88.6	73.2	56.9	46.5
MAX	228	147	554	604	422	492	495	2730	136	149	143	68
MIN	48	43	44	50	66	74	102	111	64	48	39	37
IN.	1.68	1.12	2.55	1.63	2.16	2.87	3.07	7.47	1.70	1.45	1.13	0.89

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	61.2	103	82.9	75.2	97.0	142	118	120	97.6	76.9	53.5	58.3
MAX	103	354	208	169	189	289	281	378	201	236	82.4	155	
(WY)	1973	1973	1974	1973	2001	1973	1973	2002	1974	2000	1982	1977	
MIN	36.1	23.9	23.4	24.9	32.1	53.4	57.0	45.7	48.5	34.9	27.7	25.3	
(WY)	1977	1977	1977	1977	1970	1976	2000	1977	1969	1969	1970	1980	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	89.2		119		91.3	
HIGHEST ANNUAL MEAN					150	1973
LOWEST ANNUAL MEAN					56.9	1977
HIGHEST DAILY MEAN	1420	Feb 24	2730	May 8	2830	May 20 1979
LOWEST DAILY MEAN	39	Sep 30	37	Sep 18	17	Aug 27 1970
ANNUAL SEVEN-DAY MINIMUM	45	Sep 24	44	Sep 24	20	Aug 24 1970
MAXIMUM PEAK FLOW	---		4620	May 8	6160	Jul 12 2000
MAXIMUM PEAK STAGE	---		12.06	May 8	13.75	Jul 12 2000
INSTANTANEOUS LOW FLOW	---		16	Sep 18	11	Oct 24 1999
ANNUAL RUNOFF (INCHES)	20.77		27.70		21.28	
10 PERCENT EXCEEDS	139		211		168	
50 PERCENT EXCEEDS	63		75		59	
90 PERCENT EXCEEDS	49		47		30	

e Estimated

07052160 WILSON CREEK NEAR BATTLEFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2001 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (μS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)		
OCT 04...	1040	ENVIRONMENTAL	39	7.6	86	7.8	972	19.7	--	--	--	--		
NOV 07...	1040	ENVIRONMENTAL	49	9.7	105	7.4	817	17.2	250	85.5	7.73	8.48		
DEC 12...	1230	ENVIRONMENTAL	280	10.6	103	7.6	911	12.2	240	78.9	10.3	10.4		
19...	0830	ENVIRONMENTAL	226	8.2	83	7.3	580	13.5	--	--	--	--		
JAN 24...	0945	ENVIRONMENTAL	94	9.1	86	7.7	712	11.2	200	70.0	5.26	5.03		
FEB 20...	1230	ENVIRONMENTAL	116	13.7	141	8.0	738	14.2	--	--	--	--		
MAR 19...	1930	ENVIRONMENTAL	431	7.5	73	6.5	510	12.4	150	55.4	3.17	3.36		
19...	1931	REPLICATE	--	--	--	--	--	--	150	55.2	3.17	3.32		
20...	0935	ENVIRONMENTAL	197	10.1	98	7.6	594	12.7	--	--	--	--		
APR 22...	1355	ENVIRONMENTAL	229	12.3	131	7.3	546	16.5	--	--	--	--		
MAY 28...	1315	ENVIRONMENTAL	139	11.5	125	7.3	586	17.0	180	65.5	3.36	1.86		
JUN 19...	0940	ENVIRONMENTAL	62	6.6	75	7.5	872	19.6	--	--	--	--		
JUL 22...	1430	ENVIRONMENTAL	64	8.9	113	7.5	904	25.0	230	79.8	6.93	8.41		
AUG 20...	1030	ENVIRONMENTAL	59	7.2	88	7.5	766	22.8	--	--	--	--		
SEP 10...	1110	ENVIRONMENTAL	45	7.1	87	7.7	1010	23.1	210	67.4	9.28	10.2		
DATE		SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 04...	--	172	179	218	0	--	--	--	--	<10	--	<.04	.69	.09
NOV 07...	67.2	190	191	234	0	83.1	.3	51.3	<10	490	.15	.83	8.32	
DEC 12...	87.2	191	193	235	0	101	.5	55.3	50	532	E.03	1.4	11.1	
19...	--	193	194	236	0	--	--	--	12	--	.09	.69	4.54	
JAN 24...	65.7	148	147	179	0	89.4	.2	25.5	20	376	E.04	.50	4.05	
FEB 20...	--	209	211	257	0	--	--	--	<10	--	<.04	.54	5.19	
MAR 19...	42.5	123	124	151	0	56.1	.2	25.8	86	292	E.03	1.2	2.29	
19...	42.5	--	--	--	--	57.9	.2	25.9	88	299	E.03	1.0	2.29	
20...	--	169	168	205	0	--	--	--	<10	--	E.03	.45	3.07	
APR 22...	--	171	174	212	0	--	--	--	<10	--	<.04	.34	3.08	
MAY 28...	20.3	191	190	232	0	36.3	.2	29.0	<10	358	<.04	.42	5.75	
JUN 19...	--	194	193	236	0	--	--	--	<10	--	.26	.89	5.62	
JUL 22...	97.8	164	164	200	0	111	.4	63.0	E11	530	<.04	.43	6.04	
AUG 20...	--	168	167	204	0	--	--	--	<10	--	.09	.61	6.57	
SEP 10...	124	159	162	198	0	93.4	.4	58.0	<10	434	<.04	.63	7.00	

## WHITE RIVER BASIN

07052160 WILSON CREEK NEAR BATTLEFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 04...	.024	.20	.13	.20	160	310	76	--	--	--	--	--	--
NOV 07...	.067	.21	.16	.23	94	162	76	22	77	2.6	.10	<.1	E3
DEC 12...	.025	.19	.15	.69	500	2860	1000	31	730	1.1	.08	E.1	E5
19...	.033	.10	.07	.17	K21000	K13200	K5400	--	--	--	--	--	--
JAN 24...	.011	.09	.07	.18	K180	360	992	63	338	.7	.06	E.1	E3
FEB 20...	.009	.10	.08	.12	K36	<2	K41	--	--	--	--	--	--
MAR 19...	.012	.07	.06	.43	1100	K1930	2300	8	1140	1.7	.09	.2	<6
19...	.012	.07	.06	.41	--	--	--	8	1170	1.8	.06	.1	<6
20...	.012	.07	.05	.13	570	2600	1220	--	--	--	--	--	--
APR 22...	.017	.06	.05	.11	K4	1400	400	--	--	--	--	--	--
MAY 28...	.018	.12	.10	.15	300	K300	280	6	118	.3	.04	<.1	<6
JUN 19...	.096	.11	.10	.14	K26	350	215	--	--	--	--	--	--
JUL 22...	.017	.13	.11	.16	120	460	128	24	175	2.2	.05	<.1	<6
AUG 20...	.034	.20	.19	.21	330	K550	425	--	--	--	--	--	--
SEP 10...	.011	.29	.29	.32	290	300	150	21	221	3.3	.20	<.1	<6

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	1,4-DI- CHLORO- BENZENE DISSOLV (µg/L) (34572)	1METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62054)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	26DIMET NAPH- THALENE WATER, FLTRD REC (µg/L) (62055)	2METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62056)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	15	.45	M	11.0	<.01	5.1	--	36	--	--	--	--	--
DEC 12...	34	.52	3	13.5	.02	3.1	26	36	--	--	<.002	--	--
19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	43	.47	4	17.8	.02	1.0	--	24	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	14	.20	10	22.0	.02	4.9	12	40	--	--	<.006	--	--
19...	14	.20	12	21.7	.03	5.4	12	40	--	--	<.006	--	--
20...	--	--	--	--	--	--	--	--	--	--	<.006	--	--
APR 22...	--	--	--	--	--	--	--	--	--	--	<.006	--	--
MAY 28...	E6	.19	1	17.9	<.01	.6	--	13	<.5	<.5	<.006	<.5	<.5
JUN 19...	--	--	--	--	--	--	--	--	E.1	<.5	<.006	<.5	<.5
JUL 22...	<10	.37	2	19.1	<.01	7.9	16	18	<.5	<.5	<.006	<.5	<.5
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	16	.37	2	17.7	E.01	8.4	18	23	--	--	--	--	--

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WHITE RIVER BASIN

07052160 WILSON CREEK NEAR BATTLEFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible]

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WHITE RIVER BASIN

07052160 WILSON CREEK NEAR BATTLEFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PRON-AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	PYRENE DISSOLV (µg/L) (34470)	SI-MAZINE, WATER, DISS, REC (µg/L) (04035)	STIGMA-STANOL, WATER, FLTRD REC (µg/L) (62086)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	TETRA-CHLORO- ETHY- LENE DISSOLV (µg/L) (34476)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	FYROL CEF, WATER, FLTRD REC (µg/L) (62087)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 12...	<.004	<.010	<.011	<.02	--	E.009	--	<.02	<.034	<.02	--	<.005	--
DEC 19...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<.004	<.010	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--
MAR 19...	<.004	<.010	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--
MAR 20...	<.004	<.010	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--
APR 22...	<.004	<.010	<.011	<.02	--	.018	--	<.02	<.034	<.02	--	<.005	--
MAY 28...	<.004	<.010	<.011	<.02	<.5	.007	<2	.02	<.034	<.02	M	<.005	E.1
JUN 19...	<.004	<.010	<.011	<.02	<.5	.024	<2	<.02	<.034	<.02	<.5	<.005	E.1
JUL 22...	<.004	<.010	<.011	<.02	<.5	<.005	<2	.02	<.034	<.02	<.5	<.005	E.1
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	FYROL PCF, WATER, FLTRD REC (µg/L) (62088)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRIBUTL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62089)	TRICLO-SAN, WATER, FLTRD REC (µg/L) (62090)	TRI-ETHYL CITRATE WATER, FLTRD REC (µg/L) (62091)	TRI-FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)	TRIPHNL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62092)	TRIS(2-BUTOXE- PHOS- PHATE, WATER, FLTRD (µg/L) (62093)
OCT 04...	--	--	--	--	--	--	--	--
NOV 07...	--	--	--	--	--	--	--	--
DEC 12...	--	<.002	--	--	--	<.009	--	--
DEC 19...	--	--	--	--	--	--	--	--
JAN 24...	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--
MAR 19...	--	<.002	--	--	--	E.003	--	--
MAR 19...	--	<.002	--	--	--	E.004	--	--
MAR 20...	--	<.010	--	--	--	<.009	--	--
APR 22...	--	<.002	--	--	--	<.009	--	--
MAY 28...	E.1	<.002	M	<1	E.1	<.009	M	M
JUN 19...	E.1	<.002	E.1	<1	E.1	<.009	<.5	<.5
JUL 22...	E.2	<.002	<.5	M	<.5	<.009	<.5	<.5
AUG 20...	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.



07052250 JAMES RIVER NEAR BOAZ, MO

LOCATION.--Lat 37°00'25", long 93°21'50", in NE ¼ NE ¼ NW ¼ sec.32, T.27 N., R.22 W., Christian County, Hydrologic Unit 11010002, on left bank 150 ft downstream from Frazier Bridge, 0.2 mi upstream from Turkey Hollow, and 2.0 mi southeast of Boaz.

DRAINAGE AREA.--462 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1972 to September 1980, October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is 1035.35 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are fair. Partially regulated at low flow by Lake Springfield and sewage effluent from Southwest Treatment Plant.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	48	89	203	248	5060	245	589	671	537	156	103	72
2	49	179	224	233	2180	503	533	561	496	156	96	67
3	49	197	217	221	1490	1100	474	490	458	168	92	67
4	47	143	191	205	1160	952	433	438	426	167	82	71
5	162	131	169	196	937	779	393	397	401	145	76	75
6	207	125	152	191	798	714	370	375	e392	138	76	69
7	120	117	135	188	695	695	353	408	e401	125	73	67
8	91	108	121	177	620	648	610	13400	e374	122	72	65
9	81	103	108	174	552	585	1120	12200	e340	120	68	62
10	213	98	101	169	492	600	1020	4580	e323	118	78	64
11	582	87	97	160	446	550	811	2590	e306	331	67	64
12	325	85	153	150	407	503	694	1920	e290	233	66	62
13	231	87	257	147	372	461	609	2590	e387	247	69	60
14	215	85	234	147	346	437	568	2260	e374	467	109	61
15	187	82	269	136	323	401	565	1670	e309	251	171	61
16	192	77	1130	131	301	367	506	1310	e252	198	133	61
17	157	77	4310	127	282	353	477	4310	e245	174	120	64
18	145	72	2930	126	268	343	440	7820	e230	172	278	62
19	126	88	1700	125	306	548	418	2870	e242	204	180	59
20	113	128	1200	121	373	2030	736	1960	e227	468	150	100
21	110	104	950	123	327	1510	1310	1510	e210	303	124	77
22	106	91	794	127	306	1090	1100	1220	e197	211	103	62
23	215	80	676	138	292	897	848	1070	e190	199	103	60
24	244	79	574	235	281	775	725	1090	e193	188	176	62
25	174	79	488	202	275	1480	661	977	e238	162	199	61
26	137	73	436	244	258	1720	667	822	290	147	147	60
27	113	76	390	243	243	1230	650	729	213	136	138	58
28	111	84	352	228	233	1020	626	670	224	119	126	56
29	104	126	318	218	---	884	551	775	224	113	108	56
30	99	201	288	355	---	767	669	672	178	115	95	53
31	97	---	267	2020	---	665	---	596	---	111	82	---
MEAN	156	105	627	242	701	802	651	2353	306	192	115	64.6
MAX	582	201	4310	2020	5060	2030	1310	13400	537	468	278	100
MIN	47	72	97	121	233	245	353	375	178	111	66	53
IN.	0.39	0.25	1.56	0.60	1.58	2.00	1.57	5.87	0.74	0.48	0.29	0.16

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	226	705	465	380	565	1203	899	912	448	310	144	280
MAX	444	2292	1122	1105	1465	2106	1755	2353	1294	990	359	1222	
(WY)	1978	1973	1974	1973	1975	1978	1973	2002	1974	1979	1979	1977	
MIN	63.4	55.1	55.0	53.3	101	183	268	116	170	67.3	54.7	40.7	
(WY)	1977	1977	1977	1977	1977	1976	1977	1977	1980	1980	1980	1980	

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	528	544
HIGHEST ANNUAL MEAN		879
LOWEST ANNUAL MEAN		242
HIGHEST DAILY MEAN	13400	May 8
LOWEST DAILY MEAN	47	Oct 4
ANNUAL SEVEN-DAY MINIMUM	58	Sep 24
MAXIMUM PEAK FLOW	21700	May 8
MAXIMUM PEAK STAGE	16.76	May 8
INSTANTANEOUS LOW FLOW	35	Sep 19
ANNUAL RUNOFF (INCHES)	15.50	16.00
10 PERCENT EXCEEDS	1080	1170
50 PERCENT EXCEEDS	224	245
90 PERCENT EXCEEDS	72	69

e Estimated

## WHITE RIVER BASIN

07052250 JAMES RIVER NEAR BOAZ, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1967 to September 1982, November 1983 to June 1987, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per cent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 06...	1405	ENVIRONMENTAL	74	16.7	177	8.5	580	17.0	220	76.4	6.30	4.68		
MAR 19...	1350	ENVIRONMENTAL	594	8.8	89	7.8	538	14.2	--	--	--	--		
APR 24...	0915	ENVIRONMENTAL	735	9.4	106	7.8	401	18.9	--	--	--	--		
MAY 30...	1040	ENVIRONMENTAL	668	9.2	106	7.9	425	19.6	190	67.8	5.23	2.01		
JUN 18...	1415	ENVIRONMENTAL	217	10.4	129	8.0	531	23.7	--	--	--	--		
JUL 22...	1715	ENVIRONMENTAL	181	8.5	115	7.9	525	28.9	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, DIS-SOLVED (mg/L as N) (00631)
NOV 06...	34.8	179	178	203	7	42.2	.3	35.5	<10	342	<.04	.28	3.03	
MAR 19...	--	187	190	232	0	--	--	--	24	--	<.04	.47	4.15	
APR 24...	--	146	148	181	0	--	--	--	14	--	<.04	.35	2.01	
MAY 30...	12.3	162	163	199	0	14.1	.1	10.4	18	180	<.04	.20	2.35	
JUN 18...	--	174	174	213	0	--	--	--	<10	--	<.04	.28	2.40	
JUL 22...	--	164	165	202	0	--	--	--	E15	--	<.04	.32	2.18	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	ORTHOPHOSPHATE, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µM-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 06...	.010	.06	.06	.09	K3	K13	K7	23	58	3.6	.11	<.1	E4	
MAR 19...	.022	.06	.06	.12	56	220	132	--	--	--	--	--	--	
APR 24...	.022	E.05	.03	.09	K20	K140	K40	--	--	--	--	--	--	
MAY 30...	.011	E.05	.03	<.06	230	480	309	23	123	.7	E.02	<.1	<6	
JUN 18...	E.006	.07	.05	.07	60	39	31	--	--	--	--	--	--	
JUL 22...	.016	.09	.07	.11	K10	76	176	--	--	--	--	--	--	

07052250 JAMES RIVER NEAR BOAZ, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	1,4-DI- CHLORO- BENZENE DISSOLV (µg/L) (34572)	1METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62054)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	26DIMET NAPH- THALENE WATER, FLTRD REC (µg/L) (62055)	2METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62056)
NOV 06...	20	.14	M	5.5	<.01	4.9	15	12	--	--	<.002	--	--
MAR 19...	--	--	--	--	--	--	--	--	--	--	<.006	--	--
APR 24...	--	--	--	--	--	--	--	--	--	--	<.006	--	--
MAY 30...	15	.15	M	9.5	<.01	1.1	--	5	<.5	<.5	<.006	<.5	<.5
JUN 18...	--	--	--	--	--	--	--	--	<.5	<.5	<.006	<.5	<.5
JUL 22...	--	--	--	--	--	--	--	--	<.5	<.5	<.006	<.5	<.5
DATE	3-BETA- COPRO- STANOL, WATER, FLTRD REC (µg/L) (62057)	3METHYL 1(H)- INDOLE, WATER, FLTRD REC (µg/L) (62058)	3-TERT- BHA, WATER, FLTRD REC (µg/L) (62059)	4-CUMYL PHENOL, WATER, FLTRD REC (µg/L) (62060)	4-OCTYL PHENOL, WATER, FLTRD REC (µg/L) (62061)	4-TERT- OCTYL- PHENOL, WATER, FLTRD REC (µg/L) (62062)	5METHYL 1HBENZO TRIAZLE WATER, FLTRD REC (µg/L) (62063)	ACETO- CHLOR, WATER, FLTRD REC (µg/L) (49260)	ACETO- PHENONE WATER, FLTRD REC (µg/L) (62064)	AHT NAPH- THALENE WATER, FLTRD REC (µg/L) (62065)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ANTHRA- CENE DISSOLV (µg/L) (34221)
NOV 06...	--	--	--	--	--	--	--	<.004	--	--	<.002	<.005	--
MAR 19...	--	--	--	--	--	--	--	<.006	--	--	<.004	<.005	--
APR 24...	--	--	--	--	--	--	--	<.006	--	--	<.004	<.005	--
MAY 30...	<2	<1	<5	<1	<1	<1	<2	<.006	<.5	E.1	<.004	<.005	<.5
JUN 18...	<2	<1	M	<1	M	<1	<2	<.006	<.5	E.1	<.004	<.005	M
JUL 22...	<2	<1	<5	<1	<1	<1	<2	<.006	<.5	<.5	<.004	<.005	<.5
DATE	ANTHRA- QUINONE WATER, FLTRD REC (µg/L) (62066)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µg/L) (82673)	BENZO- A- PYRENE DISSOLV (µg/L) (34248)	BENZO- PHENONE WATER, FLTRD REC (µg/L) (62067)	BETA- SITOS- TEROL, WATER, FLTRD REC (µg/L) (62068)	BISPHE- NOL A, WATER, FLTRD REC (µg/L) (62069)	BRO- MACIL, WATER, DISS, REC (µg/L) (04029)	BROMO- FORM DISSOLV (µg/L) (34288)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAF- FEINE, WATER, FLTRD REC (µg/L) (50305)	CAMPHOR WATER, FLTRD REC (µg/L) (62070)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)
NOV 06...	--	<.007	<.010	--	--	--	--	--	--	<.002	--	--	<.050
MAR 19...	--	<.007	<.010	--	--	--	--	--	--	<.002	--	--	<.041
APR 24...	--	.009	<.010	--	--	--	--	--	--	<.002	--	--	<.041
MAY 30...	<.5	.009	<.010	<.5	M	<2	M	E.1	<.5	<.002	E.1	<.5	<.041
JUN 18...	E.1	.014	<.010	E.1	E.1	<2	<1	E.2	<.5	<.002	E.1	M	<.041
JUL 22...	<.5	.009	<.010	<.5	M	<2	<1	<.5	E.2	<.002	E.1	<.5	E.008

## WHITE RIVER BASIN

07052250 JAMES RIVER NEAR BOAZ, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CARBA- ZOLE, WATER, FLTRD REC (µg/L) (62071)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CHOLE- TEROL, WATER, FLTRD REC (µg/L) (62072)	COT- ININE, WATER, FLTRD REC (µg/L) (62005)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	D-LIMO- NENE, WATER, FLTRD REC (µg/L) (62073)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)
NOV 06...	--	<.020	<.005	--	--	<.018	<.003	<.006	<.005	<.005	<.02	--	<.002
MAR 19...	--	<.020	<.005	--	--	<.018	<.003	E.003	.011	<.005	<.02	--	<.002
APR 24...	--	<.020	<.005	--	--	<.018	<.003	<.006	.012	<.005	<.02	--	<.002
MAY 30...	M	<.020	<.005	<2	<1	<.018	<.003	E.005	.007	<.005	<.02	<.5	<.002
JUN 18...	<.5	<.020	<.005	<2	<1	<.018	<.003	<.006	<.005	<.005	<.02	<.5	<.002
JUL 22...	<.5	<.020	<.005	M	<1	<.018	<.003	E.005	.014	<.005	<.02	<.5	<.002

DATE	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FLUOR- ANTHENE DISSOLV (µg/L) (34377)	FONOFOS WATER DISS REC (µg/L) (04095)	HHHMCP- BENZO- PYRAN, WATER, FLTRD REC (µg/L) (62075)	INDOLE, WATER, FLTRD REC (µg/L) (62076)	ISOBOR- NEOL, WATER, FLTRD REC (µg/L) (62077)	ISO- PHORONE DISSOLV (µg/L) (34409)	ISO- PROPYL BENZENE WATER, FLTRD REC (µg/L) (62078)	ISO- QUIN- OLINE, WATER, FLTRD REC (µg/L) (62079)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THON, DIS- SOLVED (µg/L) (39532)
NOV 06...	<.009	<.005	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027
MAR 19...	<.009	<.005	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027
APR 24...	<.009	<.005	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027
MAY 30...	<.009	<.005	<.5	<.003	M	<.5	<.5	<.5	<.5	<.5	<.004	<.035	<.027
JUN 18...	<.009	<.005	E.1	<.003	E.1	<.5	<.5	<.5	<.5	<.5	<.004	<.035	<.027
JUL 22...	<.009	<.005	<.5	<.003	<.5	<.5	<.5	<.5	<.5	<.5	<.004	<.035	<.027

DATE	MENTHOL WATER, FLTRD REC (µg/L) (62080)	METAL- AXYL WATER FLTRD REC (µg/L) (50359)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METHYL SALICY- LATE, WATER, FLTRD REC (µg/L) (62081)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	DEET, WATER, FLTRD REC (µg/L) (62082)	NAPHTH- ALENE DISSOLV (µg/L) (34443)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	NONYL- PHENOL, DIETHOX WATER, FLTRD REC (µg/L) (62083)	DI- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61705)
NOV 06...	--	--	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--
MAR 19...	--	--	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--
APR 24...	--	--	<.050	<.006	--	<.013	<.006	<.002	--	--	.035	--	--
MAY 30...	<.5	<.5	<.050	<.200	<.5	<.013	<.006	<.002	E.1	<.5	<.007	<.5	<.1
JUN 18...	<.5	E.1	<.050	<.006	<.5	<.013	<.006	<.002	E.1	<.5	<.007	M	<.1
JUL 22...	<.5	<.5	<.050	<.006	<.5	.017	<.006	<.002	M	<.5	<.007	<.5	<.1

07052250 JAMES RIVER NEAR BOAZ, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	MONO-ETHOXY-OCTYL-PHENOL WAT FLT REC (µg/L) (61706)	PARA-CRESOL, WATER, FLTRD REC (µg/L) (62084)	PARA-NONYL-PHENOL, WATER, FLTRD REC (µg/L) (62085)	P,P' DDE DISSOLV (µg/L) (34653)	PARA-THION, DIS- SOLVED (µg/L) (39542)	PEB-ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI-METH-ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PENTA-CHLORO-PHENOL DISSOLV (µg/L) (34459)	PER-METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHENAN-THRENE DISSOLV (µg/L) (34462)	PHENOL WATER FLTRD (µg/L) (34466)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO-METON, WATER, DISS, REC (µg/L) (04037)
NOV 06...	--	--	--	<.003	<.007	<.002	<.010	--	<.006	--	--	<.011	.03
MAR 19...	--	--	--	<.003	<.010	<.004	<.022	--	<.006	--	--	<.011	<.02
APR 24...	--	--	--	<.003	<.010	<.004	<.022	--	<.006	--	--	<.011	E.01
MAY 30...	<1	<1	<5	<.003	<.010	<.004	<.022	<2	<.006	<.5	E.4	<.011	.02
JUN 18...	M	<1	E1	<.003	<.010	<.004	<.022	<2	<.006	E.1	<.5	<.011	.03
JUL 22...	<1	<1	<5	<.003	<.010	<.004	<.022	<2	<.006	<.5	E.2	<.011	.06

DATE	PRON-AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	PYRENE DISSOLV (µg/L) (34470)	SI-MAZINE, WATER, DISS, REC (µg/L) (04035)	STIGMA-STANOL, WATER, FLTRD 0.7 µ REC (µg/L) (62086)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	TETRA-CHLORO-ETHY-LENE DISSOLV (µg/L) (34476)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	FYROL CEF, WATER, FLTRD REC (µg/L) (62087)
NOV 06...	<.004	<.010	<.011	<.02	--	<.011	--	<.02	<.034	<.02	--	<.005	--
MAR 19...	<.004	<.010	<.011	<.02	--	<.005	--	E.01	<.034	<.02	--	<.005	--
APR 24...	<.004	<.010	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--
MAY 30...	<.004	<.010	<.011	<.02	<.5	.022	<2	<.02	<.034	<.02	<.5	<.005	<.5
JUN 18...	<.004	<.010	<.011	<.02	E.1	<.005	<2	<.02	<.034	<.02	<.5	<.005	E.1
JUL 22...	<.004	<.010	<.011	<.02	<.5	<.005	<2	E.01	<.034	<.02	<.5	<.005	E.1

DATE	FYROL PCF, WATER, FLTRD REC (µg/L) (62088)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRIBUTL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62089)	TRICLO-SAN, WATER, FLTRD REC (µg/L) (62090)	TRI-ETHYL CITRATE WATER, FLTRD REC (µg/L) (62091)	TRI-FLUR-ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)	TRIPHNL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62092)	TRIS(2-BUTOXE- PHOS- PHATE, WATER, FLTRD REC (µg/L) (62093)
NOV 06...	--	<.002	--	--	--	<.009	--	--
MAR 19...	--	<.002	--	--	--	<.009	--	--
APR 24...	--	<.002	--	--	--	<.009	--	--
MAY 30...	M	<.002	M	<1	<.5	<.009	<.5	E.1
JUN 18...	E.1	<.002	E.1	M	E.1	<.009	E.1	E.1
JUL 22...	E.1	<.002	<.5	<1	<.5	<.009	<.5	<.5

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07052345 FINLEY CREEK BELOW RIVERDALE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2001 to current year.

WATER-QUALITY DATA, WATER YEAR JUNE 2001 TO SEPTEMBER 2001

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)	
JUN 27...	1025	ENVIRONMENTAL	59	7.7	94	7.8	381	23.4	--	--	--	--	
JUL 25...	0845	ENVIRONMENTAL	38	7.3	95	8.0	384	26.3	180	55.1	10.7	2.75	
AUG 21...	1045	ENVIRONMENTAL	22	9.1	115	7.8	419	24.4	--	--	--	--	
SEP 10...	1415	ENVIRONMENTAL	48	9.5	112	7.7	402	21.8	190	61.9	8.47	2.89	
DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AM- MONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, DIS- SOLVED (mg/L as N) (00631)
JUN 27...	--	158	158	192	0	--	--	--	--	--	.05	.23	1.02
JUL 25...	8.87	167	166	203	0	13.7	<.2	6.7	<10	204	E.02	.26	1.14
AUG 21...	--	176	175	213	0	--	--	--	--	--	<.04	.23	1.91
SEP 10...	9.58	172	174	213	0	15.3	<.2	7.4	<10	224	<.04	.24	1.61
DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
JUN 27...	.019	.16	.17	.19	36	140	28	--	--	--	--	--	--
JUL 25...	.012	.24	.23	.26	K100	210	92	11	95	.4	<8	<.1	<5
AUG 21...	.014	.28	.27	.29	160	130	52	--	--	--	--	--	--
SEP 10...	.009	.20	.18	.22	100	170	49	18	72	.5	<8	<.1	<5
DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 µ GF, REC (µg/L) (82673)
JUN 27...	--	--	--	--	--	--	--	<.002	<.004	<.002	<.005	<.007	<.010
JUL 25...	E8	.08	<1	10.3	<.01	15	14	<.002	<.004	<.002	<.005	<.007	<.010
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	23	.15	<1	25.4	<.01	6	6	--	--	--	--	--	--

07052345 FINLEY CREEK BELOW RIVERDALE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR JUNE 2001 TO SEPTEMBER 2001

DATE	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)
	JUN 27...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	E.004	<.005	<.02	<.002	<.009
JUL 25...	<.002	<.041	<.020	<.005	<.018	<.003	<.006	.007	<.005	<.02	<.002	<.009	<.005
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)	PEB- ULATE WATER FILTRD 0.7 µ GF, REC (µg/L) (82669)
	JUN 27...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007
JUL 25...	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)
	JUN 27...	<.010	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
JUL 25...	<.010	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	<.005
AUG 21...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)											
	JUN 27...	<.002	<.009										
JUL 25...	<.002	<.009											
AUG 21...	--	--											
SEP 10...	--	--											

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07052345 FINLEY CREEK BELOW RIVERDALE, MO

LOCATION.--Lat 36°58'30", long 93°19'39", in SW 1/4 NW 1/4 NE 1/4 sec.10, T.26 N., R.10 W., Christian County, Hydrologic Unit 11010002, on downstream side of center pier of Aspen Road bridge, 12.4 mi southeast of junction of Highway 160 and 60.

DRAINAGE AREA.--261 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Water-discharge records good. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	20	37	168	85	3590	134	328	482	255	84	44	30
2	20	42	181	80	1330	457	294	417	228	84	42	29
3	19	47	148	76	885	916	261	355	209	85	40	28
4	19	46	128	73	667	666	234	305	195	82	38	28
5	24	44	112	72	523	544	214	268	220	78	35	28
6	30	42	101	71	433	492	199	251	219	75	33	26
7	28	41	92	69	372	462	194	262	202	73	32	23
8	27	39	84	68	322	419	897	10500	189	70	31	23
9	25	38	79	66	284	375	1320	5400	176	67	29	23
10	42	37	74	65	253	345	841	2530	167	66	29	22
11	80	36	70	65	226	322	649	1400	159	74	29	22
12	64	33	76	63	204	300	532	996	159	68	29	21
13	53	33	92	61	188	276	778	1050	162	66	95	20
14	50	32	135	61	175	256	854	991	160	86	258	19
15	46	31	184	59	166	239	707	794	151	88	136	20
16	46	30	651	58	157	241	555	655	143	71	97	20
17	43	29	4390	59	150	246	467	5000	136	64	91	20
18	41	29	1920	59	144	245	396	4190	130	64	102	20
19	39	41	962	60	149	405	348	1630	123	121	76	22
20	38	45	631	60	150	2040	350	1070	117	131	68	25
21	37	43	445	60	149	1220	1890	792	111	99	61	26
22	37	40	337	58	151	830	870	641	106	82	53	26
23	37	38	269	64	151	650	608	534	101	106	49	26
24	38	38	217	99	150	542	552	471	98	87	72	25
25	36	36	180	131	146	577	581	416	95	74	67	23
26	36	35	154	161	142	731	476	360	99	66	53	22
27	40	49	134	164	136	648	436	319	102	60	47	21
28	40	53	122	157	131	564	404	290	97	56	41	20
29	39	60	110	151	---	498	355	433	95	53	37	20
30	39	85	e100	158	---	431	420	351	87	51	33	20
31	36	---	92	654	---	373	---	290	---	47	32	---
MEAN	37.7	41.0	401	103	412	530	567	1401	150	76.7	60.6	23.3
MAX	80	85	4390	654	3590	2040	1890	10500	255	131	258	30
MIN	19	29	70	58	131	134	194	251	87	47	29	19
IN.	0.30	0.32	3.24	0.83	3.00	4.28	4.43	11.3	1.17	0.62	0.49	0.18

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

ANNUAL MEAN	318
HIGHEST DAILY MEAN	10500
LOWEST DAILY MEAN	19 Oct 3,4, May 8
ANNUAL SEVEN-DAY MINIMUM	20 Sep 12
MAXIMUM PEAK FLOW	21400 May 8
MAXIMUM PEAK STAGE	16.31 May 8
INSTANTANEOUS LOW FLOW	18 Oct 4,5, Sep 28
ANNUAL RUNOFF (INCHES)	30.16
10 PERCENT EXCEEDS	652
50 PERCENT EXCEEDS	99
90 PERCENT EXCEEDS	29

e Estimated



07052345 FINLEY CREEK BELOW RIVERDALE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--June 2001 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00300)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (μS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)
OCT 04...	1235	ENVIRONMENTAL	19	10.3	113	7.9	434	18.4	--	--	--
NOV 06...	1130	ENVIRONMENTAL	41	9.8	99	7.9	422	14.3	200	63.0	10.1
DEC 16...	1245	ENVIRONMENTAL	580	9.5	88	7.6	331	10.4	160	52.1	7.94
16...	1246	REPLICATE	--	--	--	--	--	150	49.2	7.55	2.38
18...	1410	ENVIRONMENTAL	1670	10.3	96	7.5	289	10.3	--	--	--
JAN 23...	1145	ENVIRONMENTAL	59	14.4	128	8.5	370	8.3	180	57.5	8.86
FEB 20...	1030	ENVIRONMENTAL	151	12.8	119	7.9	357	9.7	--	--	--
MAR 19...	1145	ENVIRONMENTAL	301	10.3	97	7.7	318	10.8	--	--	--
19...	2100	ENVIRONMENTAL	688	9.5	89	6.9	316	10.8	160	49.0	7.95
APR 22...	1625	ENVIRONMENTAL	790	13.2	140	7.7	252	16.5	--	--	--
MAY 30...	0845	ENVIRONMENTAL	359	11.4	123	7.7	311	16.8	150	52.0	5.73
JUN 18...	1215	ENVIRONMENTAL	130	9.1	107	8.0	357	21.6	--	--	--
JUL 24...	0915	ENVIRONMENTAL	89	7.4	89	7.8	358	22.8	180	61.4	6.61
AUG 20...	0845	ENVIRONMENTAL	67	5.9	73	7.8	355	24.1	--	--	--
SEP 10...	0910	ENVIRONMENTAL	22	6.2	75	7.8	406	23.0	180	58.4	7.97

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT 04...	--	175	175	214	0	--	--	--	<10	--	<.04	.20	1.84
NOV 06...	10.1	164	161	200	0	16.1	<.1	8.6	<10	236	<.04	.18	1.31
DEC 16...	4.93	139	141	172	0	10.4	<.1	6.5	28	178	<.04	.32	1.45
16...	4.89	139	139	169	0	10.7	<.1	6.6	30	182	<.04	.32	1.45
18...	--	119	120	147	0	--	--	--	32	--	<.04	.40	1.89
JAN 23...	8.33	160	159	182	6	14.6	<.1	7.2	<10	214	E.02	.13	1.56
FEB 20...	--	162	162	197	0	--	--	--	10	--	<.04	.15	1.82
MAR 19...	--	148	149	181	0	--	--	--	<10	--	<.04	.12	1.25
19...	5.08	133	132	162	0	10.7	<.1	6.1	12	176	<.04	.19	1.21
APR 22...	--	101	102	124	0	--	--	--	<10	--	.04	.19	.99
MAY 30...	4.60	155	157	191	0	8.51	<.1	4.5	<10	178	<.04	.16	.96
JUN 18...	--	157	160	195	0	--	--	--	<10	--	<.04	.14	1.35
JUL 24...	6.02	155	156	191	0	10.4	<.1	5.3	<10	202	<.04	.21	1.52
AUG 20...	--	166	164	201	0	--	--	--	<10	--	<.04	.17	1.40
SEP 10...	10.2	158	159	194	0	16.9	E.1	7.0	<10	230	<.04	.23	2.01

## WHITE RIVER BASIN

07052345 FINLEY CREEK BELOW RIVERDALE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)
OCT 04...	.029	.30	.23	.29	25	31	K10	--	--	--	--	--	--
NOV 06...	.012	.16	.14	.17	24	46	29	12	23	.2	E.03	<.1	<6
DEC 16...	<.008	.06	.06	.09	1600	7700	2300	<1	272	.2	<.04	<.1	<6
16...	<.008	.06	.06	.10	--	--	--	<1	268	.2	<.04	<.1	<6
18...	.013	E.04	.03	.08	1000	560	2450	--	--	--	--	--	--
JAN 23...	<.008	.07	.08	.09	K2	38	K5	11	22	.3	E.02	<.1	E3
FEB 20...	.006	.06	.06	.07	34	<1	K19	--	--	--	--	--	--
MAR 19...	E.006	<.06	.03	E.04	K69	687	136	--	--	--	--	--	--
19...	<.008	E.04	.03	E.05	K280	1460	1040	3	115	.2	<.04	<.1	<6
APR 22...	.012	E.06	.03	.07	K4	390	88	--	--	--	--	--	--
MAY 30...	.013	E.04	<.02	E.05	950	K530	K5140	73	129	.2	<.04	<.1	<6
JUN 18...	.008	.10	.08	.09	K25	50	33	--	--	--	--	--	--
JUL 24...	.009	.15	.14	.17	44	98	680	1	157	.4	<.04	<.1	<6
AUG 20...	E.006	.16	.15	.16	73	245	245	--	--	--	--	--	--
SEP 10...	.013	.24	.25	.25	36	K58	76	1	51	.5	E.02	<.1	<6

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	E8	E.05	<1	4.7	<.01	<.3	--	7	--	--	--	--	--
DEC 16...	E6	E.05	1	6.5	<.01	E.3	2	6	<.002	<.004	<.002	<.005	<.007
16...	E5	E.07	1	7.1	<.01	<.3	2	8	<.002	<.004	<.002	<.005	<.007
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	<10	E.07	<1	5.3	E.01	.5	--	6	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	<.007
19...	<10	<.08	<1	6.2	<.01	E.3	3	6	<.006	<.006	<.004	<.005	<.007
APR 22...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	E.007
MAY 30...	54	.26	M	7.1	<.01	E.2	--	3	<.006	<.006	<.004	<.005	E.006
JUN 18...	--	--	--	--	--	--	--	--	<.006	<.006	<.004	<.005	<.007
JUL 24...	<10	<.08	M	7.7	<.01	<.3	3	5	<.006	<.006	<.004	<.005	.016
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	<10	E.07	<1	10.3	<.01	E.3	4	<1	--	--	--	--	--

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	BEN- FLUR- ALIN WAT FLT 0.7 μ	BUTYL- ATE, WATER, DISS, REC	CAR- BARYL WATER FLTRD 0.7 μ	CARBO- FURAN WATER FLTRD 0.7 μ	CHLOR- PYRIFOS DIS- SOLVED	CYANA- ZINE, WATER, DISS, REC	DCPA WATER FLTRD 0.7 μ	DEETHYL ATRA- ZINE, WATER, DISS, REC	DI- AZINON, DIS- SOLVED	DI- ELDRIN DIS- SOLVED	DISUL- FOTON WATER FLTRD 0.7 μ	EPTC WATER FLTRD 0.7 μ	ETHAL- FLUR- ALIN WAT FLT 0.7 μ
	GF, REC	REC	GF, REC	GF, REC	(μg/L)	(μg/L)	GF, REC	(μg/L)	(μg/L)	(μg/L)	GF, REC	GF, REC	GF, REC
	(82673)	(04028)	(82680)	(82674)	(38933)	(04041)	(82682)	(04040)	(39572)	(39381)	(82677)	(82668)	(82663)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	E.002	<.005	<.02	<.002	<.009
16...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009
19...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	E.001	<.005	<.02	<.002	<.009
APR 22...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	.007	<.005	<.02	<.002	<.009
MAY 30...	<.010	<.002	E.003	<.020	<.005	<.018	<.003	<.006	.011	<.005	<.02	<.002	<.009
JUN 18...	<.010	<.002	<.041	<.020	<.005	<.018	<.003	<.006	.007	<.005	<.02	<.002	<.009
JUL 24...	<.010	<.002	E.020	<.020	<.005	<.018	<.003	E.005	.020	<.005	<.02	<.002	<.009
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--
DATE	ETHO- PROP WATER FLTRD 0.7 μ	FONOFOS WATER DISS REC	LINDANE DIS- SOLVED	LIN- URON WATER FLTRD 0.7 μ	MALA- THION, DIS- SOLVED	METHYL AZIN- PHOS WAT FLT 0.7 μ	METHYL PARA- THION WAT FLT 0.7 μ	METO- LACHLOR WATER DISSOLV	METRI- BUZIN WATER FLTRD	MOL- INATE WATER FLTRD 0.7 μ	NAPROP- AMIDE WATER FLTRD 0.7 μ	P,P' DDE DISSOLV	PARA- THION, DIS- SOLVED
	GF, REC	REC	SOLVED	GF, REC	(μg/L)	GF, REC	GF, REC	(μg/L)	(μg/L)	GF, REC	GF, REC	(μg/L)	(μg/L)
	(82672)	(04095)	(39341)	(82666)	(39532)	(82686)	(82667)	(39415)	(82630)	(82671)	(82684)	(34653)	(39542)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007
16...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
19...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
APR 22...	<.005	<.003	<.004	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010
MAY 30...	<.005	<.003	<.004	<.035	<.027	<.050	<.030	<.013	<.006	<.002	<.007	<.003	<.010

## WHITE RIVER BASIN

07052345 FINLEY CREEK BELOW RIVERDALE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PEB- ULATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)
OCT 04...	--	--	--	--	--	--	--	--	--	--	--	--	--
NOV 06...	--	--	--	--	--	--	--	--	--	--	--	--	--
DEC 16...	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
16...	<.002	<.010	<.006	<.011	M	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02
18...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 23...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 19...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
19...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
APR 22...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
MAY 30...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
JUN 18...	<.004	<.022	<.006	<.011	<.01	<.004	<.010	<.011	<.02	.013	<.02	<.034	<.02
JUL 24...	<.004	<.022	<.006	<.011	E.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02
AUG 20...	--	--	--	--	--	--	--	--	--	--	--	--	--
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
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OCT 04...	--	--	--
NOV 06...	--	--	--
DEC 16...	<.005	<.002	<.009
16...	<.005	<.002	<.009
18...	--	--	--
JAN 23...	--	--	--
FEB 20...	--	--	--
MAR 19...	<.005	<.002	<.009
19...	<.005	<.002	<.009
APR 22...	<.005	<.002	<.009
MAY 30...	<.005	<.002	<.009
JUN 18...	<.005	<.002	<.009
JUL 24...	<.005	<.002	<.009
AUG 20...	--	--	--
SEP 10...	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

07052500 JAMES RIVER AT GALENA, MO

LOCATION.--Lat 36°48'19", long 93°27'41", in SW ¼ SE ¼ SW ¼ sec.6, T.24 N., R.23 W., Stone County, Hydrologic Unit 11010002, on downstream side of right pier of first arch span from left end of bridge on old State Highways 13 and 248 in Galena, 0.7 mi upstream from Railey Creek, and 42.3 mi above mouth.

DRAINAGE AREA.--987 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only, October 1921, published in WSP 1311.

REVISED RECORDS.--WSP 977: 1935(M), 1941(M).

GAGE.--Water-stage recorder. Datum of gage is 921.37 ft above National Geodetic Vertical Datum of 1929. Prior to Dec. 11, 1927, nonrecording gage at site 500 ft downstream at datum 1.48 ft higher; Dec. 11, 1927, to July 22, 1939, nonrecording gage, and July 23, 1939, to Sept. 30, 1953, water-stage recorder at present site and at datum 2.00 ft higher.

REMARKS.--Water-discharge records good except for estimated daily discharges, which are poor. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	126	179	531	593	11400	508	1420	1470	1540	358	233	164
2	120	196	625	548	6320	818	1300	1300	1370	364	221	150
3	119	310	608	531	3810	2240	1170	1140	1240	369	210	137
4	117	299	530	501	2830	2440	1050	1010	1130	348	200	139
5	134	250	458	446	2280	2010	954	895	1120	336	188	142
6	e310	236	401	431	1960	1790	872	974	1140	307	178	144
7	e290	224	357	411	1720	1720	844	892	1060	290	191	133
8	e190	216	320	393	1530	e1570	1450	13700	959	272	183	126
9	e170	204	287	376	1370	e1430	3160	29500	875	262	168	125
10	e175	194	260	365	1230	e1450	2580	11900	809	254	165	119
11	664	187	243	349	1100	e1380	2080	6420	751	338	181	117
12	714	176	269	333	1000	e1220	1800	4760	718	465	163	116
13	479	171	424	316	914	e1100	1750	5200	835	416	159	113
14	386	172	531	308	837	974	1880	5280	828	518	272	112
15	347	169	654	299	777	926	1790	4190	735	563	402	116
16	313	165	2300	283	718	842	1560	3420	657	409	362	117
17	303	160	11000	278	664	810	1390	6720	603	363	291	119
18	266	161	9990	272	618	788	1270	17100	565	335	388	124
19	249	189	5060	271	618	1140	1150	7510	538	325	396	133
20	227	222	3300	263	736	4180	1090	5070	501	539	319	133
21	214	261	2510	256	709	4260	2910	3910	469	696	275	168
22	208	235	2070	253	675	2830	2550	3200	443	465	238	151
23	204	215	1760	256	648	2260	1890	2710	416	387	211	128
24	333	205	1510	356	631	1950	1600	2440	405	390	297	123
25	309	193	1310	503	615	2200	1560	2340	394	353	383	122
26	250	191	1130	514	589	3300	1450	2000	478	312	350	119
27	218	182	1010	551	545	2640	1390	1790	497	286	277	116
28	200	214	902	532	521	2240	1350	1670	427	263	253	112
29	197	241	808	499	---	1980	1230	2970	445	251	226	110
30	188	349	717	526	---	1770	1150	2150	409	243	198	108
31	183	---	645	2470	---	1580	---	1760	---	244	181	---
MEAN	265	212	1694	461	1692	1818	1588	5013	745	365	250	128
MAX	714	349	11000	2470	11400	4260	3160	29500	1540	696	402	168
MIN	117	160	243	253	521	508	844	892	394	243	159	108
IN.	0.31	0.24	1.98	0.54	1.79	2.12	1.80	5.86	0.84	0.43	0.29	0.14

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	MEAN	485	861	958	894	1136	1525	1766	1642	1160	590	389	417
MAX	2494	4407	5435	3443	3485	5372	8376	9549	6383	4010	5159	5684	
(WY)	1942	1973	1983	1937	1966	1945	1927	1943	1935	1951	1927	1993	
MIN	58.0	65.3	79.2	68.8	87.4	129	145	179	87.6	46.0	22.6	45.8	
(WY)	1954	1954	1956	1956	1954	1954	1954	1936	1936	1954	1954	1953	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1922 - 2002
ANNUAL MEAN	701	1187	983
HIGHEST ANNUAL MEAN			2499
LOWEST ANNUAL MEAN			119
HIGHEST DAILY MEAN	21600	Feb 25	29500
LOWEST DAILY MEAN	112	Sep 5	108
ANNUAL SEVEN-DAY MINIMUM	119	Sep 1	116
MAXIMUM PEAK FLOW	---		37300
MAXIMUM PEAK STAGE	---		21.86
INSTANTANEOUS LOW FLOW	---		103
ANNUAL RUNOFF (INCHES)	9.65		16.33
10 PERCENT EXCEEDS	1210		2450
50 PERCENT EXCEEDS	319		469
90 PERCENT EXCEEDS	168		162

e Estimated

## WHITE RIVER BASIN

07052500 JAMES RIVER AT GALENA, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)
OCT												
03...	1405	ENVIRONMENTAL	120	17.9	205	8.8	556	20.0	--	--	--	--
NOV												
05...	1600	ENVIRONMENTAL	240	16.6	179	8.6	500	17.0	190	66.4	6.72	3.64
DEC												
18...	1145	ENVIRONMENTAL	9740	10.4	97	7.1	267	10.6	--	--	--	--
JAN												
23...	0930	ENVIRONMENTAL	251	12.0	102	8.5	473	6.8	200	66.5	7.22	3.26
FEB												
19...	1210	ENVIRONMENTAL	600	9.9	93	7.3	410	10.4	--	--	--	--
19...	1211	REPLICATE	--	--	--	--	--	--	--	--	--	--
MAR												
19...	0950	ENVIRONMENTAL	906	9.2	88	7.9	376	11.8	--	--	--	--
APR												
23...	1140	ENVIRONMENTAL	1940	13.6	148	7.6	306	17.8	--	--	--	--
MAY												
29...	1530	ENVIRONMENTAL	2670	12.5	139	7.8	330	18.5	150	53.0	4.43	.30
29...	1531	BLANK	--	--	--	--	--	--	--	.05	E.007	<.10
JUN												
17...	1430	ENVIRONMENTAL	598	11.1	138	8.2	401	24.3	--	--	--	--
24...	1125	ENVIRONMENTAL	398	8.3	105	8.0	431	25.4	--	--	--	--
JUL												
24...	1145	ENVIRONMENTAL	387	8.6	111	7.7	424	27.0	180	63.1	6.00	3.39
AUG												
19...	1135	ENVIRONMENTAL	393	8.1	105	8.1	248	25.8	--	--	--	--
SEP												
09...	1545	ENVIRONMENTAL	126	10.6	142	8.3	528	28.1	--	--	--	--

DATE	SODIUM, DIS- SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)
OCT													
03...	--	153	153	167	9	--	--	--	<10	--	<.04	.21	1.79
NOV													
05...	29.8	165	164	175	12	38.3	.1	22.5	<10	290	<.04	.21	1.83
DEC													
18...	--	109	108	132	0	--	--	--	70	--	.04	.72	2.04
JAN													
23...	21.2	165	165	197	2	31.5	.1	16.4	<10	270	<.04	.15	2.64
FEB													
19...	--	169	170	207	0	--	--	--	<10	--	<.04	.12	2.36
19...	--	--	--	--	--	--	--	--	<10	--	<.04	.14	2.36
MAR													
19...	--	158	158	192	0	--	--	--	<10	--	<.04	.19	1.90
APR													
23...	--	129	128	156	0	--	--	--	15	--	<.04	.28	1.35
MAY													
29...	4.06	130	131	159	0	14.3	E.1	6.1	16	190	<.04	.20	1.07
29...	.35	--	--	--	--	<.30	<.1	.1	<10	<10	<.04	<.10	<.05
JUN													
17...	--	157	158	193	0	--	--	--	<10	--	<.04	.17	1.72
24...	--	154	154	188	0	--	--	--	--	--	--	--	--
JUL													
24...	16.7	153	153	187	0	25.6	.1	13.6	<10	239	<.04	.19	1.51
AUG													
19...	--	145	146	178	0	--	--	--	<10	--	<.04	.22	1.75
SEP													
09...	--	143	144	175	0	--	--	--	<10	--	<.04	.21	2.14

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07052500 JAMES RIVER AT GALENA, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible]



## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WHITE RIVER BASIN

07052500 JAMES RIVER AT GALENA, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TRIBUTL PHOS- PHATE, WATER, FLTERD REC (µg/L) (62089)	TRICLO- SAN, WATER, FLTERD REC (µg/L) (62090)	TRI- ETHYL CITRATE WATER, FLTERD REC (µg/L) (62091)	TRIPHNL PHOS- PHATE, WATER, FLTERD REC (µg/L) (62092)	TRIS(2- BUTOXE- PHOS- PHATE, WATER, FLTERD (µg/L) (62093)
OCT					
03...	--	--	--	--	--
NOV					
05...	--	--	--	--	--
DEC					
18...	--	--	--	--	--
JAN					
23...	--	--	--	--	--
FEB					
19...	--	--	--	--	--
19...	--	--	--	--	--
MAR					
19...	--	--	--	--	--
APR					
23...	--	--	--	--	--
MAY					
29...	<.5	<1	<.5	<.5	<.5
29...	--	--	--	--	--
JUN					
17...	--	--	--	--	--
24...	<.5	<1	<.5	<.5	<.5
JUL					
24...	<.5	<1	<.5	<.5	<.5
AUG					
19...	--	--	--	--	--
SEP					
09...	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

07052800 FLAT CREEK AT JENKINS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°46'33", long 93°41'09", in SW ¼ SE ¼ NE ¼ sec.24, T.24 N., R.26 W., Barry County, Hydrologic Unit 11010003, 1.0 mi north of U.S. Highway 248 on County Road 1215 in Jenkins.

DRAINAGE AREA.--190 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
OCT 03...	1220	ENVIRONMENTAL	17	10.4	114	7.9	317	18.1	--	--	--	--
NOV 05...	1410	ENVIRONMENTAL	43	10.7	114	7.8	326	17.1	170	59.2	4.91	1.36
DEC 17...	1433	ENVIRONMENTAL	1170	8.7	85	7.7	232	12.6	--	--	--	--
JAN 22...	1530	ENVIRONMENTAL	46	15.0	134	8.6	296	8.7	160	55.1	4.42	.74
FEB 19...	1340	ENVIRONMENTAL	126	11.2	108	7.1	296	11.3	--	--	--	--
MAR 18...	1450	ENVIRONMENTAL	120	11.9	113	8.2	296	11.3	--	--	--	--
APR 23...	1410	ENVIRONMENTAL	162	16.2	181	8.2	289	18.2	--	--	--	--
MAY 29...	1245	ENVIRONMENTAL	484	11.1	118	7.8	268	16.2	91	32.9	2.17	.14
JUN 17...	1225	ENVIRONMENTAL	218	10.5	119	8.0	282	19.6	--	--	--	--
JUL 23...	1500	BLANK	--	--	--	--	--	--	--	.06	E.005	<.10
JUL 23...	1550	ENVIRONMENTAL	81	8.8	109	7.9	305	24.6	160	59.5	2.83	1.81
AUG 19...	1355	ENVIRONMENTAL	54	9.1	115	7.9	306	25.4	--	--	--	--
SEP 09...	1400	ENVIRONMENTAL	34	8.5	107	7.8	309	25.0	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, DIS-SOLVED (mg/L as N) (00631)
OCT 03...	--	139	137	167	0	--	--	--	<10	--	<.04	E.07	.97
NOV 05...	4.78	158	158	193	0	8.91	<.1	5.2	<10	188	<.04	E.08	1.42
DEC 17...	--	91	90	110	0	--	--	--	80	--	E.02	.64	1.97
JAN 22...	4.21	138	138	158	5	8.66	<.1	4.1	<10	178	<.04	E.07	1.67
FEB 19...	--	146	148	181	0	--	--	--	<10	--	<.04	E.08	2.10
MAR 18...	--	153	152	185	0	--	--	--	<10	--	<.04	E.08	1.92
APR 23...	--	127	127	155	0	--	--	--	<10	--	<.04	.10	1.67
MAY 29...	3.05	128	128	156	0	6.35	<.1	3.3	12	155	<.04	.11	1.81
JUN 17...	--	123	124	152	0	--	--	--	<10	--	<.04	E.08	1.80
JUL 23...	<.09	--	--	--	--	--	<.1	.1	<10	<10	<.04	<.10	<.05
JUL 23...	3.75	140	140	171	0	7.42	<.1	3.2	<10	176	<.04	E.09	1.76
AUG 19...	--	135	136	166	0	--	--	--	<10	--	<.04	E.07	1.62
SEP 09...	--	129	130	158	0	--	--	--	<10	--	<.04	E.09	1.57

## WHITE RIVER BASIN

07052800 FLAT CREEK AT JENKINS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS- SOLVED (µg/L as Cu) (01040)
OCT 03...	<.008	<.06	E.01	<.06	46	57	64	--	--	--	--	--	--
NOV 05...	E.006	<.06	E.01	E.03	K8	24	54	12	24	E.1	<.04	<.1	<6
DEC 17...	.103	E.05	<.02	.18	910	2450	3400	--	--	--	--	--	--
JAN 22...	<.008	<.06	<.02	<.06	K6	K6	K4	11	19	.2	<.04	<.1	<6
FEB 19...	E.003	<.06	<.02	<.06	K16	<1	25	--	--	--	--	--	--
MAR 18...	E.006	<.06	<.02	<.06	K1	K10	K17	--	--	--	--	--	--
APR 23...	E.006	<.06	E.02	<.06	<2	K18	K6	--	--	--	--	--	--
MAY 29...	<.008	E.04	.02	E.03	K660	K915	K1050	43	124	E.2	<.04	<.1	<6
JUN 17...	<.008	<.06	.02	E.04	K16	35	58	--	--	--	--	--	--
JUL 23...	<.008	<.06	<.02	<.06	--	--	--	<1	3	<.2	<.04	<.1	<6
JUL 23...	E.006	<.06	E.01	E.04	K7	39	135	1	38	.2	<.04	<.1	<6
AUG 19...	E.004	E.04	.02	E.03	K4	K71	80	--	--	--	--	--	--
SEP 09...	E.005	E.03	.02	E.03	K16	K65	61	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 03...	--	--	--	--	--	--	--	--
NOV 05...	E6	<.08	<1	E2.8	<.01	<.3	--	3
DEC 17...	--	--	--	--	--	--	--	--
JAN 22...	<10	<.08	<1	E1.1	.03	.3	--	2
FEB 19...	--	--	--	--	--	--	--	--
MAR 18...	--	--	--	--	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--
MAY 29...	13	.16	<1	5.8	<.01	<.3	--	5
JUN 17...	--	--	--	--	--	--	--	--
JUL 23...	<10	E.08	<1	<2.0	<.01	<.3	1	1
JUL 23...	<10	<.08	<1	4.2	<.01	<.3	1	2
AUG 19...	--	--	--	--	--	--	--	--
SEP 09...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## 07053400 TABLE ROCK LAKE NEAR BRANSON, MO

LOCATION.--Lat 36°35'46", long 93°18'35", in NW ¼ sec.22, T.22 N., R.22 W., Taney County, Hydrologic Unit 11010001, at dam on White River, 3.0 mi upstream from Fall Creek, and 6.1 mi southwest of Branson.

DRAINAGE AREA.--4,020 mi<sup>2</sup>.

PERIOD OF RECORD.--September 1956 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to July 18, 1958, nonrecording gage at same site and datum.

REMARKS.--Lake is formed by combination concrete-gravity and embankment type dam. Storage began on Sept. 9, 1956. Storage for purpose of filling to power pool level at elevation 881.0 ft and capacity 1,520,500 ac-ft began Nov. 24, 1958, and was reached Dec. 19, 1959. Capacity is 3,567,500 ac-ft at top of spillway gates, elevation 933.0 ft. Capacity is 3,462,000 ac-ft at top of flood control pool, elevation 931.0 ft. Capacity between elevations 915.0 ft and 931.0 ft is reserved for flood control, 760,000 ac-ft. The capacity at the lowest outlet, elevation 721.96 ft, is 3,530 ac-ft. Lake is used for flood control, power, and recreational purposes. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 3,542,000 ac-ft, May 10, 1961, elevation, 932.52 ft; minimum, since initial filling to bottom of power pool level, 1,536,000 ac-ft, Feb. 8, 1965, elevation, 881.54 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 3,092,000 ac-ft, June 17 and 18, elevation, 923.59 ft; minimum, 2,439,000 ac-ft, Dec. 11, elevation, 908.65 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	909.61	909.41	908.88	914.66	915.86	914.99	915.46	915.48	922.27	921.43	916.34	915.42
2	909.63	909.47	908.97	914.48	915.99	915.12	915.45	915.71	922.30	921.25	916.31	915.37
3	909.66	909.45	908.93	914.31	915.95	915.15	915.38	915.82	922.24	921.05	916.30	915.25
4	909.69	909.41	908.91	914.19	915.86	915.07	915.38	915.83	922.21	920.85	916.26	915.24
5	909.86	909.41	908.92	914.25	915.85	915.02	915.32	915.81	922.39	920.64	916.26	915.21
6	909.84	909.42	908.89	914.30	915.75	914.99	915.25	916.03	922.57	920.41	916.24	915.15
7	909.83	909.44	908.92	914.34	915.61	915.15	915.48	916.01	922.54	920.29	916.13	915.14
8	909.93	909.47	908.92	914.32	915.49	915.06	918.08	917.52	922.50	920.08	916.15	915.15
9	910.04	909.54	908.90	914.30	915.47	915.09	919.74	919.01	922.41	919.86	916.15	915.07
10	910.27	909.53	908.81	914.33	915.28	915.07	920.14	919.22	922.48	919.63	916.18	914.85
11	910.39	909.53	908.65	914.22	915.26	915.06	920.09	919.14	922.53	919.44	916.19	914.74
12	910.45	909.67	908.76	914.24	915.32	914.92	919.95	919.11	922.57	919.29	916.09	914.63
13	910.43	909.76	908.81	914.26	915.31	914.82	919.79	919.47	923.01	919.02	916.10	914.36
14	910.44	909.74	908.76	914.22	915.27	914.80	919.57	919.57	923.25	918.75	916.17	914.41
15	910.39	909.67	908.88	914.18	915.26	914.95	919.29	919.45	923.32	918.50	916.13	914.44
16	910.29	909.58	910.50	914.12	915.28	914.91	918.95	919.17	923.48	918.25	916.04	914.24
17	910.22	909.51	912.51	914.03	915.38	915.00	918.62	919.90	923.59	918.06	916.00	913.98
18	910.16	909.46	913.38	913.93	915.33	915.10	918.25	920.89	923.59	917.89	915.99	913.75
19	910.09	909.42	913.82	913.94	915.13	915.88	917.82	921.11	923.53	917.64	915.97	913.62
20	910.02	909.29	914.08	913.96	914.99	917.03	917.38	920.96	923.40	917.41	915.89	913.45
21	909.95	909.10	914.31	913.91	914.97	917.15	916.99	920.84	923.30	917.18	915.81	913.50
22	909.83	909.06	914.53	913.86	914.82	916.95	916.57	920.87	923.13	917.00	915.73	913.48
23	909.89	909.09	914.68	913.92	914.90	916.56	916.27	920.91	922.94	916.86	915.68	913.40
24	909.93	909.10	914.77	913.99	914.99	916.15	916.08	920.97	922.71	916.73	915.66	913.53
25	909.95	909.01	914.90	914.04	915.03	916.01	916.02	920.99	922.55	916.65	915.66	913.60
26	909.94	909.06	914.87	914.11	914.96	916.06	915.94	921.02	922.35	916.51	915.61	914.20
27	909.91	908.97	914.89	914.19	914.95	915.99	915.79	921.01	922.20	916.49	915.57	914.49
28	909.87	908.88	914.84	914.14	914.94	915.95	915.68	921.28	922.00	916.47	915.52	914.65
29	909.74	908.88	914.85	914.02	---	915.98	915.56	921.82	921.81	916.46	915.46	914.89
30	909.62	908.84	914.84	914.13	---	915.80	915.44	922.13	921.60	916.42	915.43	915.03
31	909.44	---	914.73	914.90	---	915.54	---	922.15	---	916.38	915.42	---
MEAN	909.98	909.34	911.59	914.19	915.33	915.53	917.19	919.33	922.69	918.48	915.95	914.47
MAX	910.45	909.76	914.90	914.90	915.99	917.15	920.14	922.15	923.59	921.43	916.34	915.42
MIN	909.44	908.84	908.65	913.86	914.82	914.80	915.25	915.48	921.60	916.38	915.42	913.40

(-) 2471000 2447000 2690000 2700000 2700000 2725000 2721000 3023000 2998000 2762000 2720000 2704000  
(=) -7000 -24000 +243000 +10000 0 +25000 -4000 +302000 -25000 -236000 -42000 -16000

CAL YR 2001....+353000  
WTR YR 2002....+226000

(-) Contents, in acre-feet, at the end of the month.  
(=) Change in contents, in acre-feet.

## WHITE RIVER BASIN

07053450 WHITE RIVER BELOW TABLE ROCK DAM NEAR BRANSON, MO

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°35'42", long 93°18'32", sec.22, T.22 N., R.22 W., Taney County, Hydrologic Unit 11010003, on left bank in southwest corner of U.S. Army Corps of Engineers' carpentry building, 600 ft below Table Rock Dam.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: June 1987 to current year. (See remarks).

DISSOLVED OXYGEN: June 1987 to current year. (See remarks).

INSTRUMENTATION.--Water-quality monitor since June 1987.

REMARKS.--The number of missing days exceeds 20 percent of the year. The monitor was not operated from Jan. 7 to June 24.

## WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	9.5	7.6	8.1	8.5	8.0	8.2	9.1	8.3	8.7	9.5	8.5	9.0
2	9.0	7.6	8.1	8.6	8.0	8.3	9.0	8.1	8.4	9.3	8.7	9.0
3	9.2	7.5	8.1	8.7	8.0	8.3	9.2	8.1	8.8	9.4	8.8	8.9
4	9.2	7.6	8.1	8.7	8.0	8.4	9.6	8.3	8.9	9.3	8.7	8.9
5	8.4	7.5	8.0	8.9	8.0	8.4	9.3	8.4	8.7	8.8	8.7	8.7
6	9.5	7.5	8.0	9.5	7.9	8.4	9.3	8.4	8.9	9.0	8.6	8.8
7	8.7	7.5	7.8	9.1	7.9	8.3	9.2	8.2	8.9	---	---	---
8	9.1	7.5	7.9	9.3	7.8	8.5	9.2	8.0	8.5	---	---	---
9	8.5	7.6	7.9	8.9	8.0	8.5	9.2	7.9	8.6	---	---	---
10	8.6	7.8	8.1	9.1	8.1	8.5	9.3	8.2	9.1	---	---	---
11	8.6	7.8	8.0	9.0	7.9	8.3	9.4	8.1	9.1	---	---	---
12	9.1	7.8	8.0	9.0	7.9	8.4	9.3	8.6	9.0	---	---	---
13	8.5	7.8	8.1	9.0	7.9	8.4	9.4	8.4	9.0	---	---	---
14	8.8	7.8	8.2	8.7	8.0	8.4	9.5	8.5	9.1	---	---	---
15	8.6	7.5	8.2	8.8	7.9	8.6	9.2	8.4	8.7	---	---	---
16	8.5	8.0	8.3	9.0	8.3	8.7	8.5	8.4	8.4	---	---	---
17	8.7	7.8	8.3	9.0	8.1	8.6	9.6	8.4	9.3	---	---	---
18	8.6	7.8	8.3	8.9	8.2	8.6	9.7	8.6	9.3	---	---	---
19	8.6	7.9	8.3	8.9	8.5	8.7	10.0	8.5	9.3	---	---	---
20	8.4	7.8	8.2	9.0	8.0	8.6	9.6	8.2	9.1	---	---	---
21	8.4	7.9	8.2	9.0	8.0	8.7	9.4	8.4	8.9	---	---	---
22	8.7	8.0	8.4	9.2	7.8	8.6	9.3	8.3	8.7	---	---	---
23	8.8	7.8	8.1	8.8	8.0	8.6	9.2	8.3	8.6	---	---	---
24	9.2	7.7	8.4	9.1	8.2	8.6	9.3	8.1	8.6	---	---	---
25	9.2	7.6	8.3	9.1	8.3	8.7	9.1	8.2	8.5	---	---	---
26	9.2	7.6	8.2	9.1	8.2	8.7	9.5	8.2	9.1	---	---	---
27	8.9	7.5	8.1	9.2	7.9	8.8	9.6	8.3	9.1	---	---	---
28	8.8	7.6	8.1	9.1	8.2	8.8	9.6	8.6	9.1	---	---	---
29	8.4	7.6	8.2	9.2	8.1	8.8	9.7	8.5	9.1	---	---	---
30	8.5	8.0	8.4	9.5	8.4	9.2	9.2	8.4	8.8	---	---	---
31	8.7	8.2	8.4	---	---	---	9.6	8.4	9.0	---	---	---
MONTH	9.5	7.5	8.2	9.5	7.8	8.6	10.0	7.9	8.9	---	---	---
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	9.8	9.7	9.8	12.9	10.7	11.5	11.7	10.6	11.0
2	---	---	---	10.0	9.7	9.8	12.3	10.7	11.2	11.5	10.6	11.1
3	---	---	---	9.9	9.8	9.8	12.7	10.7	11.3	12.0	10.6	11.2
4	---	---	---	9.9	9.8	9.9	12.9	10.8	11.4	11.7	10.6	11.0
5	---	---	---	9.9	9.8	9.9	10.9	10.8	10.8	11.7	10.6	11.1
6	---	---	---	11.1	9.9	10.0	10.9	10.7	10.8	11.9	10.6	11.1
7	---	---	---	11.8	9.8	10.1	11.9	10.7	10.9	11.9	10.5	11.0
8	---	---	---	10.1	10.0	10.0	11.3	10.1	10.9	11.7	10.6	11.0
9	---	---	---	10.1	10.0	10.1	11.3	10.2	10.8	11.9	10.7	11.2
10	---	---	---	10.3	10.0	10.1	11.7	10.5	10.9	11.6	10.7	11.3
11	---	---	---	12.1	10.1	10.4	11.9	10.6	11.0	11.7	10.7	11.2
12	---	---	---	10.4	10.1	10.2	11.8	10.6	11.0	11.6	10.7	11.2
13	---	---	---	10.4	10.2	10.3	12.4	10.7	11.4	11.8	10.8	11.3
14	---	---	---	10.4	10.2	10.3	11.9	10.8	11.4	11.5	10.8	11.1
15	---	---	---	10.4	10.3	10.4	11.9	10.8	11.2	11.6	10.9	11.2
16	---	---	---	10.5	10.3	10.4	11.9	10.7	11.1	12.2	10.9	11.4
17	---	---	---	10.6	10.4	10.5	11.9	10.8	11.1	11.8	10.9	11.4
18	---	---	---	10.6	10.4	10.5	11.9	11.0	11.4	12.2	10.9	11.6
19	---	---	---	10.7	10.5	10.6	11.9	10.5	11.1	12.0	11.3	11.7
20	---	---	---	10.7	10.4	10.6	11.7	11.0	11.1	12.0	11.2	11.8
21	---	---	---	10.6	10.6	10.6	11.6	10.9	11.0	12.1	11.0	11.5
22	---	---	---	10.7	10.6	10.6	11.6	11.1	11.2	12.0	10.9	11.5
23	---	---	---	11.4	10.6	10.7	11.7	10.6	11.1	11.9	10.7	11.6
24	---	---	---	12.2	10.6	10.8	11.3	10.5	10.9	11.9	11.2	11.7
25	9.6	9.4	9.5	10.7	10.6	10.6	11.6	10.5	10.9	12.2	10.9	11.4
26	9.6	9.5	9.6	11.4	10.6	10.8	11.8	10.4	11.0	12.6	10.9	11.5
27	9.6	9.6	9.6	11.8	10.8	11.3	11.7	10.5	11.0	12.6	10.9	11.6
28	9.7	9.6	9.6	10.9	10.8	10.8	11.3	10.5	10.9	12.3	11.0	11.5
29	9.7	9.6	9.6	11.6	10.7	10.9	11.3	10.5	11.0	12.4	11.1	11.6
30	9.8	9.6	9.7	12.0	10.7	11.2	11.7	10.6	11.1	12.6	11.0	11.6
31	---	---	---	12.4	10.7	11.1	11.8	10.6	11.1	---	---	---
MONTH	---	---	---	12.4	9.7	10.4	12.9	10.1	11.1	12.6	10.5	11.3

07053450 WHITE RIVER BELOW TABLE ROCK DAM NEAR BRANSON, MO--Continued

OXYGEN DISSOLVED, (mg/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	6.6	2.3	3.9	6.6	2.6	4.1	8.2	2.6	5.9
2	---	---	---	6.7	2.3	4.3	4.4	2.2	2.9	8.9	4.6	7.2
3	---	---	---	6.7	2.6	4.3	6.7	2.2	5.0	10.4	6.0	7.2
4	7.7	2.5	5.3	6.8	2.5	4.7	8.0	2.2	5.2	9.6	4.2	7.2
5	9.0	2.4	4.8	6.2	2.4	4.0	7.4	2.1	4.0	5.8	4.2	5.1
6	8.0	3.0	5.1	6.9	2.4	4.2	8.2	1.7	5.2	9.5	5.8	8.1
7	11.0	1.9	5.3	5.9	2.4	4.0	7.0	1.8	4.8	11.6	7.5	10.4
8	8.1	1.9	4.7	6.0	2.4	4.1	5.3	1.6	3.3	---	---	---
9	8.0	1.9	4.6	6.3	2.7	4.1	7.3	1.8	4.0	---	---	---
10	6.2	1.5	4.1	5.3	2.3	3.5	8.8	2.8	5.3	---	---	---
11	6.5	1.7	4.3	5.6	2.3	3.6	7.6	2.0	5.6	---	---	---
12	7.6	2.2	4.9	6.8	2.3	4.0	6.7	2.6	4.5	---	---	---
13	8.3	2.6	5.4	6.2	2.2	3.7	7.1	1.4	4.4	---	---	---
14	8.0	2.2	5.2	6.4	2.1	4.6	7.2	1.8	4.4	---	---	---
15	8.4	2.6	5.6	6.3	2.3	5.0	8.4	1.5	3.4	---	---	---
16	8.1	2.0	5.1	6.7	3.3	5.0	2.7	0.3	1.3	---	---	---
17	8.0	3.4	5.7	6.8	2.1	4.8	6.9	0.3	5.2	---	---	---
18	6.8	3.3	5.0	5.8	2.0	3.9	6.0	1.9	4.4	---	---	---
19	6.7	3.7	5.0	7.0	3.8	5.1	6.9	1.8	4.5	---	---	---
20	6.1	3.3	4.5	6.3	2.8	4.9	7.1	1.6	4.0	---	---	---
21	7.0	3.4	5.4	7.2	2.6	4.6	7.2	1.6	3.5	---	---	---
22	8.1	3.5	5.5	7.4	2.2	4.5	4.0	1.2	2.3	---	---	---
23	6.7	2.8	4.0	6.1	1.8	4.6	5.7	1.6	2.9	---	---	---
24	6.7	3.0	4.9	6.4	1.7	3.7	4.3	1.6	2.5	---	---	---
25	6.8	2.8	4.8	6.7	2.4	4.1	3.6	1.5	2.1	---	---	---
26	6.6	3.2	4.7	7.6	2.0	5.3	7.6	1.5	4.9	---	---	---
27	6.9	3.2	4.5	7.1	2.8	5.5	8.1	2.0	4.9	---	---	---
28	7.8	3.0	5.1	6.4	3.3	5.6	8.5	2.1	4.8	---	---	---
29	6.9	2.9	5.2	7.6	3.4	5.5	8.5	2.2	5.4	---	---	---
30	6.9	4.1	5.5	7.3	3.8	5.8	8.6	1.8	4.9	---	---	---
31	6.6	4.0	5.4	---	---	---	9.1	2.4	6.4	---	---	---
MONTH	---	---	---	7.6	1.7	4.5	9.1	0.3	4.2	---	---	---

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	6.1	5.8	6.0	6.8	3.9	5.5	8.2	3.7	6.1
2	---	---	---	6.1	5.8	5.9	6.7	3.6	5	8.4	4.2	6.2
3	---	---	---	6.0	5.8	5.9	6.7	4.5	5.0	7.9	3.4	6.1
4	---	---	---	6.2	5.5	5.9	6.6	4.3	4.9	8.6	4.3	6.1
5	---	---	---	6.4	5.5	6.0	7.4	5.0	7.0	8.2	2.6	5.0
6	---	---	---	6.5	5.4	5.9	7.9	4.3	7.0	7.8	2.7	5.1
7	---	---	---	7.8	5.5	5.9	7.7	4.1	5.9	7.3	2.0	4.8
8	---	---	---	6.0	5.5	5.8	7.7	4.1	5.6	8.1	1.9	5.3
9	---	---	---	7.0	5.4	6.3	7.2	2.8	6.1	7.0	1.4	4.6
10	---	---	---	6.9	5.8	6.2	7.6	3.9	5.7	7.0	2.8	4.1
11	---	---	---	6.5	5.7	5.9	8.6	3.6	5.3	7.5	2.9	4.9
12	---	---	---	6.0	5.5	5.8	6.0	3.6	4.4	7.9	1.4	4.9
13	---	---	---	5.9	5.6	5.7	6.8	3.5	4.8	7.6	2.5	4.5
14	---	---	---	5.8	5.4	5.6	6.8	3.6	5.0	6.6	1.3	3.8
15	---	---	---	5.7	5.3	5.5	7.9	3.3	5.5	6.2	0.6	3.1
16	---	---	---	6.0	5.2	5.5	7.1	4.7	5.6	5.9	1.0	3.6
17	---	---	---	5.6	5.2	5.4	7.3	3.4	5.4	5.8	1.5	3.3
18	---	---	---	6.7	5.0	5.3	6.6	4.0	5.6	8.4	1.5	4.1
19	---	---	---	5.4	4.9	5.2	6.6	4.0	5.1	5.9	3.3	4.7
20	---	---	---	5.5	4.9	5.3	7.3	3.2	5.3	8.2	3.2	5.8
21	---	---	---	5.5	5.1	5.3	8.3	4.8	6.2	7.4	3.2	5.5
22	---	---	---	5.7	5.1	5.4	7.9	4.1	5.9	8.1	4.1	6.5
23	---	---	---	7.8	5.0	5.5	7.6	3.4	6.0	8.0	4.9	6.3
24	5.4	5.3	5.3	8.6	4.5	6.2	6.9	3.3	5.4	8.5	4.7	6.6
25	6.4	5.2	6.0	7.2	4.4	5.3	7.4	3.0	5.1	---	---	---
26	6.4	6.2	6.3	7.1	4.6	5.8	7.5	3.0	5.2	---	---	---
27	6.3	6.1	6.2	6.6	3.6	5.1	7.8	3.2	5.4	---	---	---
28	6.3	6.0	6.2	7.4	4.4	5.4	7.3	3.9	5.6	---	---	---
29	6.2	6.0	6.1	6.3	4.1	4.9	7.8	3.6	5.8	---	---	---
30	6.1	5.8	6.0	6.6	3.4	5.2	7.1	4.2	5.6	---	---	---
31	---	---	---	7.1	4.4	6.0	8.3	3.5	6.0	---	---	---
MONTH	---	---	---	8.6	3.4	5.6	8.6	2.8	5.5	---	---	---

## WHITE RIVER BASIN

07053500 WHITE RIVER NEAR BRANSON, MO

LOCATION.--Lat 36°35'51", long 93°17'42", in SE ¼ NE ¼ sec.22, T.22 N., R.22 W., Taney County, Hydrologic Unit 11010003, on left bank 0.9 mi downstream from Table Rock Dam, 2.1 mi upstream from Fall Creek, 5.0 mi southwest of Branson, 7.4 mi upstream from Missouri Pacific bridge, and at mile 527.8.

DRAINAGE AREA.--4,022 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1951 to current year. July 1909 to December 1910 gage heights and discharge measurements only.

GAGE.--Water-stage recorder. Datum of gage is 696.00 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). July 19, 1909, to Dec. 31, 1910, nonrecording gage at site 7.4 mi downstream at different datum; Oct. 1, 1951, to Mar. 6, 1952, nonrecording gage at same site and datum.

REMARKS.--Flow regulated by Table Rock Lake (07053400) since Sept. 9, 1956.

COOPERATION.--Records furnished by the U.S. Army Corps of Engineers.

EXTREMES FOR PERIOD OF RECORD.--Maximum discharge, 89,100 ft<sup>3</sup>/s, May 16, 1956; gage height, 36.9 ft.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	157	685	321	2470	8090	2480	5990	3560	2580	6030	1920	1100
2	472	1530	40	4150	11200	4490	4650	850	3770	6450	2190	1580
3	995	577	2970	4580	9740	5690	4890	1940	6000	6460	1230	2910
4	1120	1610	1220	2700	8310	8840	3150	4060	4530	6620	2620	1420
5	214	770	1060	40	6820	7890	4000	3870	5070	6630	687	1630
6	152	595	2120	40	7100	4300	3870	2380	6240	6420	1510	1900
7	144	296	767	2420	7560	40	3500	4790	6130	4200	2320	1050
8	169	719	181	2860	6950	6080	8110	8670	6190	6420	899	932
9	140	1760	746	1650	6900	2550	14800	12900	6170	6410	719	2680
10	153	134	3400	1100	8540	4680	14600	14600	6260	6380	288	4820
11	146	166	2550	2230	6850	6530	14300	14300	6170	5850	210	2780
12	1110	692	3080	229	5210	6880	14300	14200	6340	6820	3220	2900
13	2060	909	2880	525	5670	6970	14400	12600	5860	6760	1410	6020
14	650	2250	2290	2350	7700	3290	14100	13500	6340	6770	628	195
15	1940	2680	636	2590	5900	412	14000	13600	3100	6780	2300	141
16	3500	1660	40	3570	5410	3080	14200	14000	288	6680	3580	4610
17	3190	1500	5550	2090	4270	872	14200	14900	1040	6910	1960	6320
18	2440	1000	5520	3950	2070	4800	14200	15100	2540	6870	1030	5230
19	2840	3600	1730	40	8490	2970	14500	15200	4050	6820	2600	5520
20	1740	2710	996	40	7990	4580	14300	15100	6310	6680	2260	4390
21	1380	3600	531	1490	7450	14800	14400	10600	6340	6450	3300	403
22	2810	1070	40	2670	6990	14800	14200	5890	6330	6190	2910	619
23	148	1230	40	650	40	14700	14200	5120	6390	4820	1520	5120
24	386	198	40	693	40	14400	14200	4640	6430	3440	1260	3830
25	214	441	40	1650	3500	13500	8420	4820	6200	4170	918	487
26	279	1210	2360	684	6070	9060	7170	4170	6230	3700	1670	488
27	503	2310	1540	40	4790	9480	8530	4780	6170	945	1720	1410
28	641	3510	2200	3040	5420	8960	6780	4190	6310	1120	2150	306
29	2730	3040	1730	5700	---	4920	7320	4500	5990	2350	2090	548
30	2950	2840	1320	2280	---	9600	8040	6890	6340	979	1560	2410
31	3270	---	3440	1820	---	10900	---	6770	---	2110	800	---
MEAN	1247	1510	1657	1946	6252	6856	10440	8467	5257	5330	1725	2458
MAX	3500	3600	5550	5700	11200	14800	14800	15200	6430	6910	3580	6320
MIN	140	134	40	40	40	40	3150	850	288	945	210	141
IN.	0.36	0.42	0.48	0.56	1.62	1.97	2.90	2.43	1.46	1.53	0.49	0.68

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1960 - 2002<sup>a</sup>, BY WATER YEAR (WY)

MEAN	1894	2884	4219	3981	4246	5508	6210	5576	3867	3623	2961	2131
MAX	6660	13110	15210	16070	11970	14800	14800	22650	11610	11470	6526	4421
(WY)	1994	1975	1986	1985	1969	1985	1985	1961	1995	1976	1979	1979
MIN	429	497	239	201	420	44.7	71.6	224	782	1158	1015	708
(WY)	1982	1999	1996	1990	1964	2000	2000	2000	1981	1981	1977	1967

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1960 - 2002 <sup>a</sup>
ANNUAL MEAN	1973	4409	3924
HIGHEST ANNUAL MEAN			7161
LOWEST ANNUAL MEAN			852
HIGHEST DAILY MEAN	11800	Feb 27	15200
LOWEST DAILY MEAN	40	Jan 12	40
ANNUAL SEVEN-DAY MINIMUM	157	Sep 23	160
ANNUAL RUNOFF (INCHES)	6.66		14.88
10 PERCENT EXCEEDS	5440		10100
50 PERCENT EXCEEDS	1220		3220
90 PERCENT EXCEEDS	138		302

<sup>a</sup> Post-regulation period.



07053600 LAKE TANEYCOMO AT COLLEGE OF THE OZARKS

## WATER-QUALITY RECORDS

LOCATION.--Lat 36°36'33", long 93°14'04", in sec.4, T.22 N., R.21 W., Taney County, Hydrologic Unit 11010003, on the right bank in the College of the Ozarks water intake pump house and 4.75 mi below Table Rock Dam.

## PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1984 to current year. (See remarks).

DISSOLVED OXYGEN: May 1984 to current year. (See remarks).

INSTRUMENTATION.--Water-quality monitor since May 1984.

REMARKS.--The number of missing days exceeds 20 percent of the year. The monitor was not operated from Jan. 7 to June 23.

## WATER TEMPERATURE, (DEGREES C), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	13.0	11.2	11.7	9.6	8.6	9.0	9.9	8.8	9.2	8.9	7.6	8.5
2	13.8	10.8	11.7	9.9	8.6	9.3	10.6	8.7	9.3	8.9	8.0	8.6
3	11.3	8.4	10.2	9.3	8.6	8.9	9.3	8.5	9.1	9.1	7.9	8.6
4	10.5	8.3	8.9	11.1	8.6	9.4	10.2	9.2	9.5	8.8	8.0	8.5
5	9.1	8.4	8.8	10.3	8.5	9.1	10.1	9.1	9.4	8.5	8.1	8.3
6	10.3	8.7	9.3	10.7	9.0	9.5	9.5	9.0	9.3	8.1	7.3	7.8
7	10.7	9.0	9.7	10.4	8.9	9.4	9.5	8.8	9.0	---	---	---
8	11.1	9.6	10.2	9.9	8.8	9.4	9.5	8.9	9.2	---	---	---
9	11.3	10.3	10.7	10.1	8.5	8.9	9.4	7.9	8.7	---	---	---
10	11.6	10.6	11.0	9.9	8.6	9.0	9.7	7.8	8.9	---	---	---
11	12.2	11.2	11.6	10.6	8.9	9.6	9.6	8.1	9.0	---	---	---
12	12.5	8.4	11.2	10.9	8.5	9.7	9.3	9.0	9.2	---	---	---
13	9.0	8.2	8.6	11.0	8.3	8.9	9.4	9.2	9.3	---	---	---
14	9.7	8.1	8.8	9.2	8.5	8.8	9.6	9.1	9.4	---	---	---
15	9.3	8.0	8.7	9.5	8.3	8.8	9.3	8.8	9.2	---	---	---
16	9.4	7.8	8.5	9.5	8.3	8.8	9.7	9.0	9.2	---	---	---
17	9.4	8.1	8.6	9.6	8.4	8.8	10.2	9.3	9.6	---	---	---
18	9.6	7.8	8.6	10.0	8.7	9.1	10.2	9.2	9.6	---	---	---
19	9.4	8.2	8.7	9.2	8.6	8.9	10.0	8.8	9.5	---	---	---
20	9.6	8.5	8.9	9.3	7.8	8.3	9.6	8.1	9.0	---	---	---
21	9.7	8.4	8.9	9.3	7.8	8.6	9.8	8.7	9.2	---	---	---
22	9.4	8.3	8.9	9.2	7.9	8.6	9.4	8.8	9.1	---	---	---
23	10.6	9.2	9.7	9.3	8.5	8.9	9.1	8.1	8.6	---	---	---
24	10.3	9.2	9.6	9.3	9.2	9.2	8.2	7.1	7.7	---	---	---
25	9.8	8.8	9.3	10.4	8.9	9.3	7.1	5.7	6.5	---	---	---
26	9.8	8.5	9.2	9.6	8.8	9.1	9.2	5.1	7.4	---	---	---
27	9.6	8.0	8.6	9.0	8.0	8.7	9.5	8.0	9.0	---	---	---
28	8.9	7.7	8.4	8.9	8.2	8.6	9.6	8.2	9.1	---	---	---
29	9.3	8.2	8.7	8.9	8.4	8.7	9.2	8.1	8.8	---	---	---
30	9.4	8.0	8.6	9.8	8.8	9.3	8.8	7.8	8.4	---	---	---
31	9.1	8.1	8.5	---	---	---	9.3	8.0	8.6	---	---	---
MONTH	13.8	7.7	9.4	11.1	7.8	9.0	10.6	5.1	8.9	---	---	---
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	10.7	9.8	10.1	13.7	11.0	11.7	13.3	11.6	12.2
2	---	---	---	10.5	9.9	10.1	13.3	10.9	11.6	14.1	11.6	12.2
3	---	---	---	10.7	9.9	10.2	14.1	10.9	11.9	12.6	11.4	11.8
4	---	---	---	10.9	9.9	10.2	14.6	11.0	11.9	13.5	11.4	11.9
5	---	---	---	11.1	10.0	10.4	14.8	11.0	12.3	12.9	11.5	12.0
6	---	---	---	11.1	10.0	10.4	---	---	---	13.4	11.4	12.0
7	---	---	---	11.3	10.1	10.5	13.9	11.2	12.1	13.6	11.4	12.0
8	---	---	---	11.3	10.0	10.5	14.2	11.1	11.9	14.0	11.9	12.6
9	---	---	---	11.4	10.1	10.6	14.2	11.7	12.4	13.9	11.4	12.1
10	---	---	---	11.5	10.2	10.6	13.4	12.4	12.7	12.9	11.4	11.7
11	---	---	---	11.2	10.2	10.6	14.7	12.8	13.4	13.5	11.5	11.9
12	---	---	---	10.9	10.2	10.5	14.1	11.3	12.6	13.3	11.4	11.9
13	---	---	---	11.1	10.2	10.6	12.7	11.3	11.5	12.1	11.4	11.6
14	---	---	---	11.4	10.2	10.6	13.0	11.4	11.8	12.8	11.5	12.0
15	---	---	---	11.2	10.3	10.7	13.9	11.1	12.1	14.2	12.3	13.1
16	---	---	---	11.3	10.4	10.7	12.0	11.1	11.4	14.5	11.6	12.8
17	---	---	---	11.2	10.5	10.7	12.7	11.1	11.6	12.1	11.7	11.9
18	---	---	---	11.6	10.5	10.8	14.1	11.3	12.2	12.8	11.7	12.0
19	---	---	---	11.4	10.6	10.8	13.0	11.4	11.9	12.3	11.8	12.1
20	---	---	---	11.9	10.6	11.1	13.1	11.2	11.8	12.9	11.8	12.3
21	---	---	---	11.9	10.6	11.1	13.4	11.1	11.7	14.6	12.3	13.1
22	---	---	---	12.0	10.6	11.2	13.1	11.2	11.7	14.2	12.1	13.1
23	---	---	---	11.8	10.7	11.0	14.2	11.3	12.0	13.7	11.5	12.6
24	10.7	9.6	10.2	12.8	10.7	11.3	12.8	11.5	11.9	12.6	11.4	12.1
25	10.5	9.6	10.1	12.2	10.7	11.2	14.0	11.6	12.3	14.1	11.7	12.5
26	10.8	9.6	10.0	12.3	10.8	11.3	13.8	11.3	12.1	15.5	13.1	14.2
27	10.9	9.6	10.1	15.3	11.0	12.2	13.7	11.3	11.8	14.8	12.1	13.5
28	10.7	9.7	10.1	15.3	11.6	12.7	13.0	11.3	11.7	14.0	12.0	12.8
29	10.9	9.7	10.2	13.5	11.0	12.1	13.1	11.3	11.8	15.6	13.6	14.1
30	10.9	9.7	10.2	14.1	11.0	11.9	13.2	11.4	12.0	14.9	12.0	13.2
31	---	---	---	14.5	11.0	12.5	14.1	11.7	12.6	---	---	---
MONTH	---	---	---	15.3	9.8	10.9	---	---	---	15.6	11.4	12.4

## WHITE RIVER BASIN

07053600 LAKE TANEYCOMO AT COLLEGE OF THE OZARKS--Continued

OXYGEN DISSOLVED, (mg/L), WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DAY	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
OCTOBER			NOVEMBER			DECEMBER			JANUARY			
1	---	---	---	7.88	5.43	6.73	7.34	5.79	6.39	9.45	6.98	7.87
2	---	---	---	8.52	6.13	7.09	7.43	6.13	6.87	8.95	6.91	7.37
3	---	---	---	6.71	5.39	6.15	6.96	5.66	6.22	9.41	7.04	7.72
4	---	---	---	8.61	5.04	6.61	7.35	5.44	5.91	8.95	7.19	7.83
5	6.37	4.98	5.80	7.31	5.16	6.01	6.90	5.53	6.08	8.43	7.49	8.03
6	8.22	5.58	6.77	7.21	4.33	5.78	7.82	5.52	6.11	9.03	7.7	8.29
7	9.30	7.17	8.32	7.45	5.34	6.10	7.95	5.47	6.28	9.10	7.71	8.48
8	9.71	8.31	8.89	7.40	4.81	6.26	7.48	6.23	6.65	---	---	---
9	9.78	8.28	9.11	6.09	4.17	4.84	8.13	6.33	7.12	---	---	---
10	8.74	7.04	7.83	5.76	3.72	4.60	7.34	5.25	6.32	---	---	---
11	8.04	6.41	7.13	6.36	4.46	5.39	7.78	5.21	6.12	---	---	---
12	7.78	5.52	6.74	7.62	5.13	6.35	7.13	5.46	6.12	---	---	---
13	7.90	5.75	6.68	6.68	4.33	5.24	7.32	5.35	5.88	---	---	---
14	8.47	5.83	6.90	6.40	4.05	4.86	7.66	5.71	6.31	---	---	---
15	7.48	4.54	6.34	6.61	4.48	5.28	7.96	5.91	6.50	---	---	---
16	8.24	4.54	6.08	6.64	4.49	5.76	10.6	7.61	8.45	---	---	---
17	7.94	5.29	6.60	7.34	4.05	5.40	11.0	5.51	7.96	---	---	---
18	7.77	5.09	6.45	6.53	4.57	5.27	7.18	4.59	5.48	---	---	---
19	7.49	5.40	6.19	6.41	3.97	5.18	7.19	4.92	5.85	---	---	---
20	8.01	5.18	6.32	6.89	3.96	5.14	6.70	5.72	6.06	---	---	---
21	8.77	5.04	6.85	6.01	4.47	5.45	7.56	6.58	6.95	---	---	---
22	8.11	5.72	6.59	7.02	4.38	5.44	7.48	6.47	6.92	---	---	---
23	8.87	6.78	7.91	6.80	4.97	6.00	8.04	7.06	7.47	---	---	---
24	7.83	6.07	6.84	6.44	5.57	6.14	9.44	7.62	8.51	---	---	---
25	9.41	5.76	7.67	7.39	5.93	6.66	10.2	8.43	8.80	---	---	---
26	9.94	7.19	8.81	7.37	5.61	6.19	9.00	6.33	7.67	---	---	---
27	10.0	6.90	8.25	7.06	5.26	5.97	8.22	6.29	6.88	---	---	---
28	8.70	7.04	7.95	6.32	5.62	6.02	8.33	6.24	6.81	---	---	---
29	9.30	6.22	7.91	6.41	5.60	5.96	8.82	5.99	7.21	---	---	---
30	9.89	6.04	7.42	7.39	5.69	6.32	7.99	6.76	7.16	---	---	---
31	8.59	5.57	6.89	---	---	---	---	---	---	---	---	---
MONTH	---	---	---	8.61	3.72	5.81	---	---	---	---	---	---
JUNE			JULY			AUGUST			SEPTEMBER			
1	---	---	---	7.69	4.81	6.08	---	---	---	9.98	5.79	7.50
2	---	---	---	6.84	5.35	5.80	---	---	---	10.5	5.81	7.18
3	---	---	---	6.60	4.94	5.64	---	---	---	8.10	4.57	6.14
4	---	---	---	6.47	4.73	5.42	---	---	---	10.6	3.12	6.39
5	---	---	---	6.29	4.48	5.21	---	---	---	11.4	5.12	7.04
6	---	---	---	---	---	---	---	---	---	11.6	3.72	6.13
7	---	---	---	---	---	---	---	---	---	10.9	2.95	6.13
8	---	---	---	---	---	---	10.4	2.97	5.54	10.8	3.05	7.22
9	---	---	---	---	---	---	10.8	4.54	6.89	10.8	4.82	7.29
10	---	---	---	9.45	3.47	6.70	8.91	3.65	6.94	10.1	3.78	5.40
11	---	---	---	8.52	5.47	6.75	9.69	2.79	7.24	8.39	2.87	5.34
12	---	---	---	7.68	5.70	6.54	9.44	2.54	6.11	9.55	3.10	5.86
13	---	---	---	7.92	5.60	6.52	6.58	3.59	5.11	6.90	4.43	5.83
14	---	---	---	8.46	5.63	6.68	8.64	1.12	5.40	7.56	4.85	6.25
15	---	---	---	8.12	5.65	6.53	9.24	1.86	5.85	8.90	4.46	7.13
16	---	---	---	8.16	5.58	6.51	8.02	1.39	5.87	8.72	4.30	6.39
17	---	---	---	7.60	5.46	6.24	---	---	---	5.96	2.85	4.80
18	---	---	---	8.01	5.43	6.14	---	---	---	5.32	3.61	4.54
19	---	---	---	7.41	5.31	6.02	---	---	---	6.14	4.56	5.13
20	---	---	---	8.32	5.27	6.46	---	---	---	7.47	4.72	5.58
21	---	---	---	8.34	5.35	6.50	---	---	---	7.18	5.40	6.19
22	---	---	---	8.86	5.32	6.61	10.2	4.46	6.66	7.50	5.09	5.96
23	---	---	---	9.61	5.49	6.43	9.54	4.05	5.46	8.34	4.82	6.48
24	9.74	6.46	7.60	12.9	5.22	6.78	8.29	4.88	6.14	6.67	4.84	5.71
25	8.16	6.05	6.84	10.0	5.56	6.89	9.42	4.94	6.40	6.21	4.88	5.47
26	7.82	5.63	6.67	9.80	6.08	7.40	9.35	4.19	5.96	9.40	5.64	7.58
27	7.43	5.32	6.25	13.8	5.25	7.10	9.26	2.95	5.34	8.40	4.45	6.91
28	6.99	5.20	5.94	14.3	4.49	6.77	9.30	4.27	6.12	6.10	3.92	4.85
29	7.03	5.14	5.94	10.2	4.17	6.42	9.94	4.24	6.29	8.75	5.89	7.37
30	6.80	4.92	5.69	---	---	---	9.87	4.60	6.87	7.32	3.75	5.80
31	---	---	---	---	---	---	10.3	5.12	7.26	---	---	---
MONTH	---	---	---	---	---	---	---	---	---	11.6	2.85	6.19

## WHITE RIVER BASIN

445

07053700 LAKE TANEYCOMO AT BRANSON, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°38'09", long 93°12'52", in SE ¼ SE ¼ NW ¼ sec.4, T.22 N., R.21 W., Taney County, Hydrologic Unit 11010003, 1,000 ft downstream of Turkey Creek, at bridge on Business Route 65 in Branson.

PERIOD OF RECORD.--July 1977 to June 1991 and November 1996 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	HARD- NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS- SOLVED (mg/L as Ca) (00915)	MAGNE- SIUM, DIS- SOLVED (mg/L as Mg) (00925)	POTAS- SIUM, DIS- SOLVED (mg/L as K) (00935)	SODIUM, DIS- SOLVED (mg/L as Na) (00930)
NOV 27...	0815	ENVIRONMENTAL	6.7	59	7.2	259	8.9	130	37.5	7.87	1.53	5.55
MAR 19...	1700	ENVIRONMENTAL	11.1	99	8.0	256	8.6	--	--	--	--	--
APR 23...	0840	ENVIRONMENTAL	12.5	111	7.8	236	8.8	--	--	--	--	--
23...	0845	REPLICATE	--	--	--	--	--	--	--	--	--	--
MAY 22...	0750	ENVIRONMENTAL	8.6	78	7.7	243	9.8	70	21.4	4.15	.13	4.57
JUN 18...	0914	BLANK	--	--	--	--	--	--	--	--	--	--
18...	0915	ENVIRONMENTAL	8.8	89	7.7	282	15.0	--	--	--	--	--
JUL 23...	1430	ENVIRONMENTAL	5.8	55	7.5	227	11.8	--	--	--	--	--

DATE	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR- BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR- BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO- RIDE, DIS- SOLVED (mg/L as Cl) (00940)	FLUO- RIDE, DIS- SOLVED (mg/L as F) (00950)	SULFATE DIS- SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS- PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS- SOLVED (mg/L) (70300)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>3</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
NOV 27...	108	109	133	0	10.4	<.1	8.6	<10	158	E.02	.23	.56	<.008
MAR 19...	120	121	147	0	--	--	--	24	--	<.04	.29	.35	E.006
APR 23...	95	96	117	0	--	--	--	<10	--	<.04	.18	.44	E.005
23...	--	--	--	--	--	--	--	<10	--	<.04	.24	.42	E.007
MAY 22...	102	104	127	0	8.92	<.1	7.9	<10	136	<.04	.18	.63	<.008
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	111	110	135	0	--	--	--	<10	--	<.04	.27	.61	E.005
JUL 23...	96	97	119	0	--	--	--	<10	--	<.04	.17	.66	.008

DATE	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	ORTHO- PHOS- PHATE, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	IRON, DIS- SOLVED (µg/L as Fe) (01046)
NOV 27...	<.06	<.02	<.06	K15	K72	K18	7	18	.4	<.04	<.1	<6	23
MAR 19...	<.06	<.02	E.04	270	K1540	600	--	--	--	--	--	--	--
APR 23...	<.06	<.02	<.06	K5	<2	K2	--	--	--	--	--	--	--
23...	<.06	<.02	<.06	K2	K4	K2	--	--	--	--	--	--	--
MAY 22...	<.06	<.02	<.06	K8	K6	K8	4	15	.3	<.04	<.1	<6	<10
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--
18...	<.06	<.02	<.06	K15	41	K18	--	--	--	--	--	--	--
JUL 23...	<.06	<.02	<.06	K1	K10	K3	--	--	--	--	--	--	--

## WHITE RIVER BASIN

07053700 LAKE TANEYCOMO AT BRANSON, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	1,4-DI- CHLORO- BENZENE DISSOLV (µg/L) (34572)	1METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62054)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ GF, REC (µg/L) (82660)	26DIMET NAPH- THALENE WATER, FLTRD REC (µg/L) (62055)	2METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62056)	3-BETA- COPRO- STANOL, WATER, FLTRD REC (µg/L) (62057)	3METHYL 1(H)- INDOLE, WATER, FLTRD REC (µg/L) (62058)
NOV 27...	<.08	<1	20.8	<.01	<.3	9	--	--	<.002	--	--	--	--
MAR 19...	--	--	--	--	--	--	--	--	<.006	--	--	--	--
APR 23...	--	--	--	--	--	--	--	--	<.006	--	--	--	--
23...	--	--	--	--	--	--	--	--	<.006	--	--	--	--
MAY 22...	E.07	<1	5.3	<.01	E.3	1	<.5	<.5	<.006	<.5	<.5	<2	<1
JUN 18...	--	--	--	--	--	--	--	--	<.006	--	--	--	--
18...	--	--	--	--	--	--	<.5	M	<.006	<.5	E.1	<2	<1
JUL 23...	--	--	--	--	--	--	<.5	<.5	<.006	<.5	<.5	<2	<1
DATE	3-TERT- BHA, WATER, FLTRD REC (µg/L) (62059)	4-CUMYL PHENOL, WATER, FLTRD REC (µg/L) (62060)	4-OCTYL PHENOL, WATER, FLTRD REC (µg/L) (62061)	4-TERT- OCTYL- PHENOL, WATER, FLTRD REC (µg/L) (62062)	5METHYL 1H BENZO TRIAZLE WATER, FLTRD REC (µg/L) (62063)	ACETO- CHLOR, WATER, FLTRD REC (µg/L) (49260)	ACETO- PHENONE WATER, FLTRD REC (µg/L) (62064)	AHT NAPH- THALENE WATER, FLTRD REC (µg/L) (62065)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ANTHRA- CENE DISSOLV (µg/L) (34221)	ANTHRA- QUINONE WATER, FLTRD REC (µg/L) (62066)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)
NOV 27...	--	--	--	--	--	<.004	--	--	<.002	<.005	--	--	E.007
MAR 19...	--	--	--	--	--	<.006	--	--	<.004	<.005	--	--	E.004
APR 23...	--	--	--	--	--	<.006	--	--	<.004	<.005	--	--	E.006
23...	--	--	--	--	--	<.006	--	--	<.004	<.005	--	--	E.006
MAY 22...	<5	<1	<1	<1	<2	<.006	<.5	<.5	<.004	<.005	<.5	<.5	<.007
JUN 18...	--	--	--	--	--	<.006	--	--	<.004	<.005	--	--	<.007
18...	<5	<1	<1	<1	<2	<.006	<.5	<.5	<.004	<.005	<.5	<.5	<.007
JUL 23...	<5	<1	<1	<1	<2	<.006	<.5	<.5	<.004	<.005	<.5	<.5	<.007
DATE	BEN- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82673)	BENZO- A- PYRENE DISSOLV (µg/L) (34248)	BENZO- PHENONE WATER, FLTRD REC (µg/L) (62067)	BETA- SITOS- TEROL, WATER, FLTRD REC (µg/L) (62068)	BISPHE- NOL A, WATER, FLTRD REC (µg/L) (62069)	BRO- MACIL, WATER, DISS, REC (µg/L) (04029)	BROMO- FORM DISSOLV (µg/L) (34288)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAF- FEINE, WATER FLTRD REC (µg/L) (50305)	CAMPHOR WATER, FLTRD REC (µg/L) (62070)	CAR- BARYL WATER FLTRD 0.7 µ GF, REC (µg/L) (82680)	CARBA- ZOLE, WATER, FLTRD REC (µg/L) (62071)	FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)
NOV 27...	<.010	--	--	--	--	--	--	<.002	--	--	<.041	--	<.020
MAR 19...	<.010	--	--	--	--	--	--	<.002	--	--	<.041	--	<.020
APR 23...	<.010	--	--	--	--	--	--	<.002	--	--	<.041	--	<.020
23...	<.010	--	--	--	--	--	--	<.002	--	--	<.041	--	<.020
MAY 22...	<.010	<.5	M	<2	<1	<.5	<.5	<.002	<.5	<.5	<.041	<.5	<.020
JUN 18...	<.010	--	--	--	--	--	--	<.002	--	--	<.041	--	<.020
18...	<.010	<.5	<.5	<2	<1	<.5	<.5	<.002	<.5	<.5	<.041	<.5	<.020
JUL 23...	<.010	<.5	<.5	<2	<1	<.5	<.5	<.002	<.5	<.5	<.041	<.5	<.020

07053700 LAKE TANEYCOMO AT BRANSON, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CHOL- TEROL, WATER, FLTRD REC (µg/L) (62072)	COT- ININE, WATER, FLTRD REC (µg/L) (62005)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	D-LIMO- NENE, WATER, FLTRD REC (µg/L) (62073)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)
NOV 27...	<.005	--	--	<.018	<.003	E.003	<.005	<.005	<.02	--	<.002	<.009	<.005
MAR 19...	<.005	--	--	<.018	<.003	<.006	<.005	<.005	<.02	--	<.002	<.009	<.005
APR 23...	<.005	--	--	<.018	<.003	E.003	<.005	<.005	<.02	--	<.002	<.009	<.005
23...	<.005	--	--	<.018	<.003	E.004	<.005	<.005	<.02	--	<.002	<.009	<.005
MAY 22...	<.005	<2	<1	<.018	<.003	<.006	<.005	<.005	<.02	<.5	<.002	<.009	<.005
JUN 18...	<.005	--	--	<.018	<.003	<.006	<.005	<.005	<.02	--	<.002	<.009	<.005
18...	<.005	<2	<1	<.018	<.003	<.006	<.005	<.005	<.02	<.5	<.002	<.009	<.005
JUL 23...	<.005	<2	<1	<.018	<.003	<.006	E.002	<.005	<.02	<.5	<.002	<.009	<.005
DATE	FLUOR- ANTHENE DISSOLV (µg/L) (34377)	FONOFOS WATER DISS REC (µg/L) (04095)	HHHMC- BENZO- PYRAN, WATER, FLTRD REC (µg/L) (62075)	INDOLE, WATER, FLTRD REC (µg/L) (62076)	ISOBOR- NEOL, WATER, FLTRD REC (µg/L) (62077)	ISO- PHORONE DISSOLV (µg/L) (34409)	ISO- PROPYL BENZENE WATER, FLTRD REC (µg/L) (62078)	ISO- QUIN- OLINE, WATER, FLTRD REC (µg/L) (62079)	LINDANE DIS- SOLVED (µg/L) (39341)	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	MENTHOL WATER, FLTRD REC (µg/L) (62080)	METAL- AXYL WATER FLTRD REC (µg/L) (50359)
NOV 27...	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027	--	--
MAR 19...	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027	--	--
APR 23...	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027	--	--
23...	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027	--	--
MAY 22...	<.5	<.003	<.5	<.5	<.5	<.5	<.5	<.5	<.004	<.035	<.027	<.5	<.5
JUN 18...	--	<.003	--	--	--	--	--	--	<.004	<.035	<.027	--	--
18...	<.5	<.003	<.5	<.5	<.5	<.5	<.5	<.5	<.004	<.035	<.027	<.5	<.5
JUL 23...	<.5	<.003	<.5	<.5	<.5	<.5	<.5	<.5	<.004	<.035	<.027	<.5	<.5
DATE	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METHYL SALICY- LATE, WATER, FLTRD REC (µg/L) (62081)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN SENCOR WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	DEET, WATER, FLTRD REC (µg/L) (62082)	NAPHTH- ALENE DISSOLV (µg/L) (34443)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	NONYL- PHENOL, DIETHOX WATER, FLTRD REC (µg/L) (62083)	DI- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61705)	MONO- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61706)	PARA- CRESOL, WATER, FLTRD REC (µg/L) (62084)
NOV 27...	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--	--	--
MAR 19...	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--	--	--
APR 23...	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--	--	--
23...	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--	--	--
MAY 22...	<.050	<.100	<.5	<.013	<.006	<.002	M	<.5	<.007	<5	<1	<1	<1
JUN 18...	<.050	<.006	--	<.013	<.006	<.002	--	--	<.007	--	--	--	--
18...	<.050	<.006	<.5	<.013	<.006	<.002	M	E.1	<.007	<5	<1	<1	<1
JUL 23...	<.050	<.006	<.5	<.013	<.006	<.002	E.2	<.5	<.007	<5	<1	<1	M

## WHITE RIVER BASIN

07053700 LAKE TANEYCOMO AT BRANSON, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	PARA-NONYL-PHENOL, WATER, FLTRD REC (µg/L) (62085)	P,P' DDE DISSOLV (µg/L) (34653)	PARA-THION, DIS-SOLVED (µg/L) (39542)	PEBULATE WATER FILTRD 0.7 µ GF, REC (µg/L) (82669)	PENDIMETHALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PENTACHLORO-PHENOL DISSOLV (µg/L) (34459)	PER-METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)	PHENAN-THRENE DISSOLV (µg/L) (34462)	PHENOL WATER FILTRD (µg/L) (34466)	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO-METON, WATER, DISS, REC (µg/L) (04037)	PRON-AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA-CHLOR, WATER, DISS, REC (µg/L) (04024)
	NOV 27...	--	<.003	<.007	<.002	<.010	--	<.006	--	--	<.011	<.01	<.004
MAR 19...	--	<.003	<.010	<.004	<.022	--	<.006	--	--	<.011	M	<.004	<.010
APR 23...	--	<.003	<.010	<.004	<.022	--	<.006	--	--	<.011	<.01	<.004	<.010
23...	--	<.003	<.010	<.004	<.022	--	<.006	--	--	<.011	<.01	<.004	<.010
MAY 22...	<5	<.003	<.010	<.004	<.022	<2	<.006	<.5	E.3	<.011	<.01	<.004	<.010
JUN 18...	--	<.003	<.010	<.004	<.022	--	<.006	--	--	<.011	<.01	<.004	<.010
18...	<5	<.003	<.010	<.004	<.022	<2	<.006	<.5	<.5	<.011	<.01	<.004	<.010
JUL 23...	<5	<.003	<.010	<.004	<.022	<2	<.006	<.5	.7	<.011	<.01	<.004	<.010
DATE	PRO-PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO-PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	PYRENE DISSOLV (µg/L) (34470)	SI-MAZINE, WATER, DISS, REC (µg/L) (04035)	STIGMA-WATER, FLTRD REC (µg/L) (62086)	TEBU-THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER-BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER-BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	TETRA-CHLORO-ETHY-LENE DISSOLV (µg/L) (34476)	THIO-BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	FYROL CEF, WATER, FLTRD REC (µg/L) (62087)	FYROL PCF, WATER, FLTRD REC (µg/L) (62088)	TRIAL-LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)
NOV 27...	<.011	<.02	--	<.011	--	<.02	<.034	<.02	--	<.005	--	--	<.002
MAR 19...	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--	--	<.002
APR 23...	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--	--	<.002
23...	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--	--	<.002
MAY 22...	<.011	<.02	<.5	<.005	<2	<.02	<.034	<.02	<.5	<.005	<.5	<.5	<.002
JUN 18...	<.011	<.02	--	<.005	--	<.02	<.034	<.02	--	<.005	--	--	<.002
18...	<.011	<.02	<.5	<.005	<2	<.02	<.034	<.02	<.5	<.005	<.5	<.5	<.002
JUL 23...	<.011	<.02	<.5	<.005	<2	<.02	<.034	<.02	<.5	<.005	<.5	<.5	<.002
DATE	TRIBUTYL PHOS-PHATE, WATER, FLTRD REC (µg/L) (62089)	TRICLOSAN, WATER, FLTRD REC (µg/L) (62090)	TRI-ETHYL CITRATE WATER, FLTRD REC (µg/L) (62091)	TRI-FLURALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)	TRIPHENYL PHOS-PHATE, WATER, FLTRD REC (µg/L) (62092)	TRIS(2-BUTOXY-PHOS-PHATE, WATER, FLTRD REC (µg/L) (62093)							
NOV 27...	--	--	--	<.009	--	--							
MAR 19...	--	--	--	<.009	--	--							
APR 23...	--	--	--	<.009	--	--							
23...	--	--	--	<.009	--	--							
MAY 22...	<.5	<1	<.5	<.009	<.5	<.5							
JUN 18...	--	--	--	<.009	--	--							
18...	<.5	<1	<.5	<.009	<.5	<.5							
JUL 23...	<.5	<1	<.5	<.009	M	<.5							

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

07053810 BULL CREEK NEAR WALNUT SHADE, MO

LOCATION.--Lat 36°43'05", long 93°12'24", in NW ¼ SE ¼ SE ¼ sec.4, T.23 N., R.21 W., Taney County, Hydrologic Unit 11010003, on downstream side of State Highway F bridge pier, 1.3 miles southwest of Walnut Shade and 3.9 miles upstream from Lake Taneycomo.

DRAINAGE AREA.--191 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to September 1996, October 1997 to current year. Stage only station July 1991 to September 1994, and October 1996 to September 1997.

GAGE.--Water-stage recorder. Datum of gage is 712.45 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.3	12	167	69	2520	84	208	416	210	25	8.3	6.5
2	3.2	17	117	69	918	831	184	671	168	23	7.3	5.7
3	2.8	24	88	73	577	952	162	406	140	25	7.1	6.2
4	3.0	23	69	68	393	616	142	395	121	25	6.4	5.5
5	6.0	21	55	55	292	493	127	274	125	22	6.0	5.2
6	7.6	19	46	52	244	460	118	1220	131	19	5.5	4.7
7	6.1	19	39	48	211	387	237	755	111	17	6.3	4.1
8	5.0	18	34	46	187	329	4680	12200	96	14	6.7	3.7
9	4.7	20	31	45	167	284	1450	3960	89	13	6.1	3.6
10	8.9	19	28	45	150	233	818	1920	84	11	5.3	3.5
11	29	18	26	43	132	200	561	1120	76	11	6.3	3.3
12	23	16	71	41	118	184	420	825	74	14	6.4	3.0
13	24	15	351	40	107	166	549	1930	76	16	6.6	2.9
14	20	14	291	38	98	150	632	1160	76	15	13	2.9
15	18	15	248	37	91	142	507	809	71	14	13	3.4
16	18	14	4020	36	85	149	407	620	63	14	9.9	3.7
17	17	14	5720	35	80	146	454	2920	55	28	8.0	4.0
18	18	13	1370	35	75	141	366	2040	50	46	7.5	4.5
19	17	19	731	36	117	1380	305	1020	46	54	7.5	6.0
20	15	23	440	35	228	2030	300	647	41	51	7.2	12
21	15	25	305	33	190	1000	488	449	39	34	6.2	8.7
22	14	25	241	33	156	632	362	345	35	26	5.2	7.9
23	16	25	193	40	136	463	285	284	33	22	4.5	6.2
24	16	26	158	184	123	372	258	271	29	20	8.3	5.0
25	14	25	134	170	113	692	220	261	29	17	10	4.4
26	13	23	117	134	103	707	204	218	28	15	11	4.1
27	13	23	105	111	92	527	207	187	26	14	9.1	4.0
28	13	27	96	97	86	423	209	165	42	11	7.7	3.8
29	13	38	87	86	---	351	182	602	34	10	8.5	3.4
30	12	180	79	86	---	289	400	458	29	10	8.0	3.0
31	12	---	73	3110	---	244	---	281	---	9.7	7.2	---
MEAN	12.9	25.7	501	162	278	486	515	1253	74.2	20.8	7.62	4.83
MAX	29	180	5720	3110	2520	2030	4680	12200	210	54	13	12
MIN	2.8	12	26	33	75	84	118	165	26	9.7	4.5	2.9

STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	25.6	107	167	276	317	348	411	387	166	72.9	15.1	28.2
MAX	72.3	402	501	721	704	834	809	1253	594	323	45.8	165
(WY)	1999	1995	2002	1995	2001	1998	1995	2002	1995	2000	2000	1996
MIN	4.75	6.24	74.7	72.4	44.0	68.0	63.9	31.4	34.7	2.31	3.02	4.77
(WY)	2000	2000	1999	2000	1996	1996	2000	2000	1994	1992	1996	1995

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR FOR PERIOD OF RECORD

ANNUAL MEAN	152	280	191
HIGHEST ANNUAL MEAN			330
LOWEST ANNUAL MEAN			95.1
HIGHEST DAILY MEAN	5850	12200	12200
LOWEST DAILY MEAN	2.8	2.8	1.6
ANNUAL SEVEN-DAY MINIMUM	3.3	3.2	1.8
MAXIMUM PEAK FLOW	---	32200 <sup>a</sup>	32200 <sup>a</sup>
MAXIMUM PEAK STAGE	---	14.41	14.41
INSTANTANEOUS LOW FLOW	---	2.4	1.6
10 PERCENT EXCEEDS	271	608	420
50 PERCENT EXCEEDS	39	46	56
90 PERCENT EXCEEDS	8.4	6.1	5.7

<sup>a</sup> From rating extended above 12,500 ft<sup>3</sup>/s.

## WHITE RIVER BASIN

07053900 SWAN CREEK NEAR SWAN, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°47'02", long 93°05'04", in SW ¼ SE ¼ NE ¼ sec.3, T.24 N., R.20 W., Taney County, Hydrologic Unit 11010003, 0.8 mi south of Swan, 4.0 mi northwest of Highway 76 on County Highway AA.

DRAINAGE AREA.--148 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 27...	1040	ENVIRONMENTAL	48	9.6	88	7.8	423	10.1	230	50.7	25.9	.61		
NOV 27...	1045	BLANK	--	--	--	--	--	--	--	--	--	--		
JAN 08...	0830	ENVIRONMENTAL	38	13.7	105	7.3	388	3.1	--	--	--	--		
JAN 08...	0835	BLANK	--	--	--	--	--	--	--	--	--	--		
MAR 19...	1315	ENVIRONMENTAL	1400	11.3	103	8.0	306	9.6	--	--	--	--		
MAR 19...	1320	BLANK	--	--	--	--	--	--	--	--	--	--		
MAY 22...	1030	ENVIRONMENTAL	232	9.0	92	8.0	355	15.1	180	41.2	18.6	.31		
MAY 22...	1031	BLANK	--	--	--	--	--	--	--	.10	.010	<.10		
JUL 23...	1220	ENVIRONMENTAL	44	7.4	92	8.1	415	24.8	--	--	--	--		
JUL 23...	1225	BLANK	--	--	--	--	--	--	--	--	--	--		
SEP 17...	1200	ENVIRONMENTAL	7.8	6.4	77	8.0	455	23.0	--	--	--	--		
SEP 17...	1201	BLANK	--	--	--	--	--	--	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, DIS-SOLVED (mg/L as N) (00631)
NOV 27...	2.22	217	218	265	0	6.37	<.1	6.4	<10	232	<.04	E.08	.15	
NOV 27...	--	--	--	--	--	--	--	--	<10	<10	E.02	<.10	<.05	
JAN 08...	--	195	197	240	0	--	--	--	<10	--	<.04	E.05	.48	
JAN 08...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	
MAR 19...	--	148	148	180	0	--	--	--	17	--	<.04	.32	.17	
MAR 19...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	
MAY 22...	2.00	183	184	225	0	3.96	<.1	4.4	<10	197	<.04	E.07	.23	
MAY 22...	.47	--	--	--	--	<.30	<.1	E.1	<10	<10	<.04	<.10	<.05	
JUL 23...	--	223	224	274	0	--	--	--	<10	--	<.04	E.06	.16	
JUL 23...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	
SEP 17...	--	235	236	288	0	--	--	--	<10	--	<.04	.12	.09	
SEP 17...	--	--	--	--	--	--	--	--	<10	--	<.04	<.10	<.05	



07053900 SWAN CREEK NEAR SWAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHOS- PHOS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF WATER (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS- SOLVED (µg/L as Cu) (01040)
NOV													
27...	<.008	<.06	<.02	<.06	K3	52	160	5	13	E.1	<.04	<.1	<6
27...	<.008	<.06	<.02	<.06	--	--	--	--	--	<.2	<.04	<.1	<6
JAN													
08...	<.008	<.06	<.02	<.06	K1	K9	K9	--	--	--	--	--	--
08...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
MAR													
19...	<.008	<.06	<.02	E.04	570	K1480	907	--	--	--	--	--	--
19...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
MAY													
22...	<.008	<.06	<.02	<.06	K10	31	98	5	16	E.1	<.04	<.1	<6
22...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	.5	<6
JUL													
23...	E.004	<.06	<.02	<.06	160	29	315	--	--	--	--	--	--
23...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--
SEP													
17...	<.008	<.06	<.02	<.06	K98	21	73	--	--	--	--	--	--
17...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
27...	<10	<.08	<1	E3.1	<.01	<.3	--	5
27...	<10	E.05	<1	<2.0	<.01	<.3	--	3
JAN								
08...	--	--	--	--	--	--	--	--
08...	--	--	--	--	--	--	--	--
MAR								
19...	--	--	--	--	--	--	--	--
19...	--	--	--	--	--	--	--	--
MAY								
22...	E5	E.04	M	3.2	<.01	<.3	--	2
22...	<10	<.08	<1	<2.0	<.01	<.3	<1	<1
JUL								
23...	--	--	--	--	--	--	--	--
23...	--	--	--	--	--	--	--	--
SEP								
17...	--	--	--	--	--	--	--	--
17...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07054080 BEAVER CREEK AT BRADLEYVILLE, MO

LOCATION.--Lat 36°46'47", long 92°54'25", in NE ¼ SW ¼ NW ¼ sec.11, T.24 N., R.18 W., Taney County, Hydrologic Unit 11010003, on downstream side of right bridge pier on State Highway 76 and 0.5 mi east of Bradleyville.

DRAINAGE AREA.--298 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 803.00 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records good except for estimated daily discharges, and those above 3,000 ft<sup>3</sup>/s, which are fair. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	23	23	189	140	3080	148	313	594	265	e75	46	39
2	23	29	152	129	1100	254	282	603	241	72	44	38
3	23	32	115	123	750	472	253	504	219	80	43	36
4	23	30	93	118	582	391	229	467	203	73	42	35
5	31	29	78	113	480	357	213	432	224	69	40	34
6	34	28	69	111	420	363	199	617	231	65	40	33
7	32	27	61	105	372	356	297	605	200	62	43	32
8	28	27	55	101	330	334	7420	11800	179	59	40	32
9	27	27	49	98	296	330	1980	4810	168	56	38	31
10	35	26	45	96	262	325	1160	2340	166	54	37	31
11	50	25	42	92	234	312	839	1450	163	53	38	31
12	45	25	261	88	217	305	695	1310	186	84	37	31
13	40	25	641	86	199	281	734	3560	257	75	546	30
14	36	25	400	84	184	264	1380	1460	231	63	271	31
15	33	24	279	82	174	298	790	1040	184	57	159	33
16	31	24	4910	79	164	416	661	839	158	57	112	33
17	29	24	8090	78	154	396	707	5090	142	55	91	35
18	28	24	2070	76	146	358	610	2640	130	426	82	36
19	27	32	1030	79	174	1470	569	1420	120	254	71	39
20	26	31	692	75	263	2340	1130	1000	112	131	64	47
21	25	29	550	74	278	1150	2060	773	e106	101	59	41
22	24	26	460	73	242	775	837	653	e102	82	54	35
23	24	29	384	137	220	629	656	575	e97	84	53	33
24	24	294	324	496	204	548	591	535	e94	76	58	32
25	24	226	275	398	189	649	538	494	e105	68	64	31
26	23	133	243	332	174	648	472	434	e95	61	55	31
27	22	92	219	279	161	547	462	391	e88	58	51	31
28	22	81	199	245	151	488	459	362	e84	53	48	31
29	22	85	181	219	---	444	418	343	e79	50	45	31
30	23	166	163	203	---	393	538	317	e77	50	43	30
31	23	---	151	2540	---	350	---	290	---	48	41	---
MEAN	28.4	56.6	725	224	400	529	916	1540	157	85.5	79.2	33.8
MAX	50	294	8090	2540	3080	2340	7420	11800	265	426	546	47
MIN	22	23	42	73	146	148	199	290	77	48	37	30

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

MEAN	55.9	264	236	325	538	540	537	543	195	81.0	65.6	82.4
MAX	134	1074	725	919	991	1349	935	1540	593	168	168	309
(WY)	1999	1997	2002	1995	1999	1998	1995	2002	1995	1995	1995	1996
MIN	25.9	28.4	62.7	56.8	105	142	70.9	37.8	41.1	49.7	22.5	22.5
(WY)	2001	2000	2000	2000	2000	2000	2000	2000	2001	1997	2001	2001

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1994 - 2002

ANNUAL MEAN	188	399	287
HIGHEST ANNUAL MEAN			464
LOWEST ANNUAL MEAN			62.5
HIGHEST DAILY MEAN	8090	Dec 17	11800
LOWEST DAILY MEAN	15	Sep 7	22
ANNUAL SEVEN-DAY MINIMUM	17	Sep 1	23
MAXIMUM PEAK FLOW	---		20800
MAXIMUM PEAK STAGE	---		17.92
INSTANTANEOUS LOW FLOW	---		22
10 PERCENT EXCEEDS	326		718
50 PERCENT EXCEEDS	58		120
90 PERCENT EXCEEDS	23		29

e Estimated

07057500 NORTH FORK RIVER NEAR TECUMSEH, MO

LOCATION.--Lat 36°37'22", long 92°14'53", in NE ¼ SE ¼ sec.35, T.23 N., R.12 W., Ozark County, Hydrologic Unit 11010006, on right bank 3.2 mi downstream from Spring Creek, 3.5 mi northeast of Tecumseh.

DRAINAGE AREA.--561 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1944 to current year.

GAGE.--Water-stage recorder. Datum of gage is 584.67 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to May 12, 1945, nonrecording gage at same site and datum 0.22 ft lower.

REMARKS.--Water-discharge records good. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	272	262	429	402	3530	466	1090	1170	1010	510	473	422
2	271	265	424	389	1930	485	1040	1130	967	516	470	416
3	271	265	382	380	1360	523	966	1060	928	504	460	413
4	269	262	357	373	1080	581	900	1000	895	497	455	407
5	277	260	341	372	908	e555	856	948	915	499	445	400
6	274	257	341	369	814	e525	816	940	917	489	447	394
7	271	256	329	361	754	e505	879	996	854	475	453	392
8	268	251	319	354	700	e480	5790	22500	811	475	434	390
9	265	250	308	348	653	2480	4100	7880	834	468	427	387
10	279	247	302	348	623	2440	2610	4540	911	469	421	383
11	305	247	298	343	588	1740	2070	3120	1100	478	418	378
12	301	244	307	339	556	1490	1770	2550	998	494	419	374
13	301	242	339	335	536	1330	1720	6720	902	484	1520	372
14	291	242	376	330	515	1200	4820	3690	831	494	1510	369
15	281	242	412	327	499	1090	3090	2750	781	482	903	368
16	278	242	611	322	484	1080	2290	2280	746	469	732	364
17	277	242	2990	322	470	1100	2020	4790	716	469	641	369
18	270	241	2130	322	459	1030	1880	4790	695	632	586	369
19	269	242	1310	323	471	1970	1670	3220	675	839	550	370
20	269	239	975	318	557	6330	1520	2550	651	745	523	405
21	269	238	804	312	670	3500	2400	2140	632	660	495	405
22	268	238	708	307	636	2420	1810	1860	613	581	476	394
23	269	238	638	309	593	1950	1500	1680	597	582	463	378
24	277	282	582	414	564	1690	1360	1540	584	632	473	367
25	272	353	539	596	545	1660	1270	1440	581	562	484	362
26	269	376	506	573	524	1850	1170	1330	565	528	533	358
27	269	336	480	526	495	1690	1110	1250	549	510	496	361
28	267	334	462	489	476	1550	1090	1200	542	492	468	355
29	266	350	443	461	---	1440	1060	1150	536	483	452	350
30	264	376	427	436	---	1300	1080	1100	528	486	438	348
31	260	---	413	749	---	1180	---	1060	---	474	431	---
MEAN	274	271	622	392	785	1536	1858	3044	762	532	564	381
MAX	305	376	2990	749	3530	6330	5790	22500	1100	839	1520	422
MIN	260	238	298	307	459	466	816	940	528	468	418	348
IN.	0.56	0.54	1.28	0.81	1.46	3.16	3.70	6.26	1.52	1.09	1.16	0.76

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1945 - 2002, BY WATER YEAR (WY)

	MEAN	410	648	703	720	861	1073	1252	1150	758	537	414	422
MAX	1040	2751	2842	2322	2872	2473	3623	3044	2515	1632	889	2093	
(WY)	1985	1986	1983	1950	1985	1945	1945	2002	1945	1951	1958	1993	
MIN	214	224	223	201	261	290	359	343	276	239	204	193	
(WY)	1957	1955	1956	1956	1964	1981	2000	2001	1954	1954	1954	1954	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1945 - 2002
ANNUAL MEAN	416	921	744
HIGHEST ANNUAL MEAN			1555
LOWEST ANNUAL MEAN			299
HIGHEST DAILY MEAN	4590	Feb 25	22500
LOWEST DAILY MEAN	238	Nov 21-23	238
ANNUAL SEVEN-DAY MINIMUM	240	Nov 17	240
MAXIMUM PEAK FLOW	---	55700	May 8
MAXIMUM PEAK STAGE	---	22.30	May 8
INSTANTANEOUS LOW FLOW	---	238	Nov 18-23
ANNUAL RUNOFF (INCHES)	10.06	22.28	18.03
10 PERCENT EXCEEDS	577	1850	1340
50 PERCENT EXCEEDS	322	495	499
90 PERCENT EXCEEDS	269	269	291

e Estimated

## WHITE RIVER BASIN

07057500 NORTH FORK RIVER NEAR TECUMSEH, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1969 to June 1972, October 1978 to September 1979, November 1983 to June 1987, November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 26...	1515	ENVIRONMENTAL	367	10.4	100	7.8	391	12.1	220	45.5	25.7	.63		
JAN 07...	1455	ENVIRONMENTAL	358	14.1	121	7.5	353	8.2	--	--	--	--		
MAR 20...	1345	ENVIRONMENTAL	6740	9.8	91	7.8	168	11.4	--	--	--	--		
MAY 21...	1400	ENVIRONMENTAL	2090	9.6	98	7.8	245	15.7	130	26.8	14.7	.65		
JUL 23...	0900	ENVIRONMENTAL	589	7.4	83	7.8	362	19.0	--	--	--	--		
SEP 16...	1430	ENVIRONMENTAL	364	11.4	125	7.8	388	19.0	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 26...	1.64	207	208	254	0	6.59	.1	4.5	<10	212	.09	E.08	.28	
JAN 07...	--	161	163	198	0	--	--	--	<10	--	<.04	E.08	1.48	
MAR 20...	--	77	77	93	0	--	--	--	104	--	<.04	.81	.51	
MAY 21...	2.04	109	111	136	0	8.29	<.1	3.0	<10	135	<.04	.10	.26	
JUL 23...	--	186	188	229	0	--	--	--	<10	--	<.04	E.10	.79	
SEP 16...	--	196	199	242	0	--	--	--	<10	--	<.04	.10	.62	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 26...	<.008	<.06	<.02	<.06	K3	33	50	8	17	.4	<.04	<.1	<6	
JAN 07...	<.008	<.06	<.02	<.06	<1	K8	K2	--	--	--	--	--	--	
MAR 20...	.010	.07	.04	.17	K1200	4900	5000	--	--	--	--	--	--	
MAY 21...	E.005	<.06	<.02	<.06	K40	K233	123	38	76	<.2	<.04	<.1	<6	
JUL 23...	E.006	<.06	<.02	<.06	140	413	1380	--	--	--	--	--	--	
SEP 16...	<.008	<.06	<.02	<.06	K3	K14	K7	--	--	--	--	--	--	

07057500 NORTH FORK RIVER NEAR TECUMSEH, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 26...	<10	<.08	<1	E1.2	<.01	<.3	4	4
JAN 07...	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--
MAY 21...	41	.28	1	7.6	<.01	<.3	--	3
JUL 23...	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07057750 BRYANT CREEK BELOW EVANS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°52'16", long 92°28'18", in SE ¼ NW ¼ NW ¼ sec.10, T.25 N., R.14 W., Douglas County, Hydrologic Unit 11010006, 13 mi south of Ava, 12 mi west of Highway 95 and Highway 14 intersection, on Highway 14.

DRAINAGE AREA.--214 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

				DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)	
NOV 27...	1350	ENVIRONMENTAL		50	11.2	103	7.8	401	10.6	230	47.8	26.4	1.37	
JAN 08...	1220	ENVIRONMENTAL		49	12.4	99	7.5	402	4.5	--	--	--	--	
MAR 20...	1020	ENVIRONMENTAL		1000	10.8	98	7.9	275	10.0	--	--	--	--	
MAY 21...	1627	ENVIRONMENTAL		4500	10.0	106	7.8	297	17.0	160	33.9	17.6	.42	
JUL 22...	1525	ENVIRONMENTAL		50	10.6	136	8.2	394	26.1	--	--	--	--	
SEP 17...	0920	ENVIRONMENTAL		40	6.4	74	7.8	417	20.8	--	--	--	--	
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 27...	2.27	211	214	261	0	6.45	<.1	4.9	<10	200	<.04	.10	.64	
JAN 08...	--	192	195	238	0	--	--	--	10	--	<.04	E.06	.95	
MAR 20...	--	135	135	165	0	--	--	--	22	--	<.04	.28	.37	
MAY 21...	2.18	147	148	181	0	3.72	<.1	3.8	10	161	<.04	E.09	.33	
JUL 22...	--	199	198	242	0	--	--	--	<10	--	<.04	.10	.29	
SEP 17...	--	217	219	267	0	--	--	--	<10	--	<.04	.10	.45	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHODIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 27...	E.005	<.06	<.02	<.06	63	59	120	8	36	.4	<.04	<.1	<6	
JAN 08...	E.007	<.06	E.01	<.06	<1	K3	K7	--	--	--	--	--	--	
MAR 20...	E.004	E.04	<.02	E.05	K42	600	528	--	--	--	--	--	--	
MAY 21...	E.005	<.06	<.02	E.03	K50	125	240	24	95	.2	<.04	<.1	<6	
JUL 22...	E.006	<.06	<.02	<.06	K5	26	41	--	--	--	--	--	--	
SEP 17...	<.008	<.06	<.02	<.06	360	480	940	--	--	--	--	--	--	

07057750 BRYANT CREEK BELOW EVANS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 27...	<10	<.08	<1	4.7	<.01	<.3	1	4
JAN 08...	--	--	--	--	--	--	--	--
MAR 20...	--	--	--	--	--	--	--	--
MAY 21...	19	.17	<1	13.5	<.01	<.3	--	2
JUL 22...	--	--	--	--	--	--	--	--
SEP 17...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07058000 BRYANT CREEK NEAR TECUMSEH, MO

LOCATION.--Lat 36°37'33", long 92°18'16", in E 1/2 sec.32, T.23 N., R.12 W., Ozark County, Hydrologic Unit 11010006, on left bank 0.8 mi downstream from Pine Creek, 3 mi northwest of Tecumseh, and 5 mi upstream from mouth.

DRAINAGE AREA.--570 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1944 to September 1985, October 1994 to September 1996, October 1998 to current year.

REVISED RECORDS.--WSP 1117: Drainage area. WSP 1441: 1945, 1946-47(M), 1950. WSP 1731: 1945-47, 1950.

GAGE.--Water-stage recorder. Datum of gage 573.15 ft above National Geodetic Vertical Datum of 1929 (levels by Corps of Engineers). Prior to July 30, 1945, nonrecording gage at same site and datum.

REMARKS.--Records fair. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	111	125	239	228	3670	252	668	1110	1150	265	223	178
2	118	131	218	213	1560	279	617	1030	1070	272	206	175
3	117	133	199	206	1090	313	558	934	954	283	200	174
4	117	130	193	197	870	328	506	865	887	272	196	171
5	123	129	182	193	733	340	488	805	889	260	187	168
6	129	127	188	197	623	347	459	800	826	252	274	165
7	129	125	181	189	555	357	665	927	688	246	277	164
8	123	124	175	190	490	366	7150	19300	615	245	207	165
9	121	124	165	184	445	1770	3800	9180	602	233	192	161
10	128	124	159	181	410	1190	2090	4310	632	233	187	160
11	157	123	154	175	378	917	1580	2790	621	246	185	160
12	154	122	161	177	e345	827	1370	2210	568	260	184	161
13	152	122	185	166	e325	744	1290	7220	637	338	2770	159
14	142	122	266	162	e305	687	2830	3440	605	323	1450	157
15	133	122	280	167	285	638	2020	2450	518	274	750	159
16	131	124	736	164	271	655	1540	2020	477	254	520	161
17	129	124	5500	162	259	640	1670	5940	444	243	388	172
18	133	124	2460	156	249	612	1500	7070	414	294	338	176
19	131	128	1340	166	273	1860	1280	3520	426	302	296	180
20	129	127	923	169	359	4440	1220	2570	399	293	275	213
21	129	124	716	166	363	2460	3650	2070	379	288	250	220
22	131	125	599	163	343	1630	1840	1780	357	263	232	202
23	131	126	516	166	325	1310	1360	1630	339	258	222	173
24	131	209	443	280	314	1160	1170	1530	329	248	228	166
25	129	401	400	433	303	1280	1050	1480	320	233	228	162
26	126	247	374	360	287	1290	948	1380	312	222	208	160
27	124	204	339	323	267	1140	890	1330	304	219	202	159
28	122	e170	307	296	256	1010	871	1310	296	213	192	159
29	121	e180	292	277	---	928	827	1280	291	206	189	158
30	125	221	256	258	---	824	871	1310	278	214	184	159
31	124	---	245	1010	---	729	---	1230	---	220	181	---
MEAN	129	151	593	238	570	1010	1559	3059	554	257	375	170
MAX	157	401	5500	1010	3670	4440	7150	19300	1150	338	2770	220
MIN	111	122	154	156	249	252	459	800	278	206	181	157
IN.	0.26	0.29	1.20	0.48	1.04	2.04	3.05	6.19	1.09	0.52	0.76	0.33

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	234	403	508	498	634	843	954	901	513	343	229	228
MEAN	234	403	508	498	634	843	954	901	513	343	229	228
MAX	893	1664	4280	2350	2129	2483	3497	3059	1990	1748	910	654
(WY)	1971	1952	1983	1950	1985	1945	1945	2002	1945	1951	1950	1996
MIN	112	127	119	112	141	138	178	175	118	110	105	103
(WY)	1957	1955	1956	1956	1981	1981	1981	1954	1954	1954	1954	1954

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	264	725	523
HIGHEST ANNUAL MEAN			1229
LOWEST ANNUAL MEAN			149
HIGHEST DAILY MEAN	5500	Dec 17	19300
LOWEST DAILY MEAN	111	Oct 1	111
ANNUAL SEVEN-DAY MINIMUM	118	Sep 29	121
MAXIMUM PEAK FLOW	---		46500
MAXIMUM PEAK STAGE	---		22.94
INSTANTANEOUS LOW FLOW	---		111
ANNUAL RUNOFF (INCHES)	6.30		17.26
10 PERCENT EXCEEDS	401		1530
50 PERCENT EXCEEDS	165		274
90 PERCENT EXCEEDS	125		129

e Estimated



07061150 WEST FORK BLACK RIVER AT CENTERVILLE, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°26'44", long 90°57'45", in SE ¼ SW ¼ SE ¼ sec.20, T.32 N., R.1 E., Reynolds County, Hydrologic Unit 11010007, approximately 1.0 mi north of Centerville on State Highway 72.

DRAINAGE AREA.--137 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 14...	1100	ENVIRONMENTAL	35	10.3	100	7.3	374	13.2	190	37.5	23.2	.79		
JAN 22...	1340	ENVIRONMENTAL	48	12.9	107	7.5	331	6.3	--	--	--	--		
MAR 07...	0855	ENVIRONMENTAL	133	11.7	99	7.7	270	7.0	--	--	--	--		
MAY 15...	1405	ENVIRONMENTAL	806	8.9	95	7.9	164	17.4	82	17.1	9.44	1.01		
JUL 16...	1130	ENVIRONMENTAL	63	8.7	106	8.0	363	24.2	--	--	--	--		
SEP 03...	1450	ENVIRONMENTAL	36	8.6	111	7.8	380	26.8	--	--	--	--		
DATE		ANC WATER UNFLTRD FET FIELD (mg/L as Na) (00930)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	
NOV 14...	6.18	147	150	183	0	17.5	E.1	32.3	138	210	<.04	<.10	E.03	
JAN 22...	--	134	135	165	0	--	--	--	<10	--	<.04	E.08	.19	
MAR 07...	--	112	112	136	0	--	--	--	<10	--	<.04	<.10	.14	
MAY 15...	1.57	77	77	94	0	1.57	<.1	8.1	<10	97	<.04	.10	.05	
JUL 16...	--	144	146	178	0	--	--	--	<10	--	<.04	<.10	.08	
SEP 03...	--	138	140	170	0	--	--	--	<10	--	<.04	<.10	.05	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 14...	<.008	<.06	<.02	<.06	67	20	K3	9	10	.2	<.04	<.1	<6	
JAN 22...	<.008	<.06	<.02	<.06	<1	K1	K1	--	--	--	--	--	--	
MAR 07...	<.008	<.06	<.02	<.06	<1	K1	K2	--	--	--	--	--	--	
MAY 15...	E.006	<.06	<.02	<.06	K4	K33	K50	64	121	.2	E.02	<.1	<6	
JUL 16...	<.008	<.06	<.02	<.06	K4	K9	K9	--	--	--	--	--	--	
SEP 03...	<.008	<.06	<.02	<.06	K2	K8	K13	--	--	--	--	--	--	

## WHITE RIVER BASIN

07061150 WEST FORK BLACK RIVER AT CENTERVILLE, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 14...	<10	E.05	<1	<2.0	<.01	E.2	16	11
JAN 22...	--	--	--	--	--	--	--	--
MAR 07...	--	--	--	--	--	--	--	--
MAY 15...	40	1.22	<1	12.2	<.01	<.3	2	25
JUL 16...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07061260 EAST FORK BLACK RIVER NEAR IRONTON, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°36'14", long 90°47'19", in NW ¼ SE ¼ SE ¼ sec.35, T.34 N., R.2 E., Iron County, Hydrologic Unit 11010007, approximately 6.0 mi southwest of State Highway 21 on State Highway N.

DRAINAGE AREA.--16 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)	
NOV 14...	0915	ENVIRONMENTAL	2.7	7.3	65	7.5	305	9.1	160	33.7	19.4	.68	
JAN 22...	1515	ENVIRONMENTAL	2.7	12.7	102	7.8	243	4.9	--	--	--	--	
MAR 06...	1600	ENVIRONMENTAL	11	12.0	109	7.5	131	9.9	--	--	--	--	
MAY 15...	0900	ENVIRONMENTAL	135	9.1	91	7.5	92	14.2	41	8.69	4.75	1.13	
JUL 16...	1410	ENVIRONMENTAL	29	8.6	106	7.5	144	24.5	--	--	--	--	
SEP 03...	1715	ENVIRONMENTAL	3.9	6.7	87	7.3	180	26.7	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 14...	2.69	147	150	183	0	10.2	<.1	5.9	<10	170	<.04	E.05	<.05
JAN 22...	--	118	118	144	0	--	--	--	<10	--	<.04	E.05	E.03
MAR 06...	--	51	50	62	0	--	--	--	<10	--	<.04	.14	E.03
MAY 15...	1.35	43	43	52	0	1.52	<.1	6.5	<10	57	<.04	E.10	<.05
JUL 16...	--	71	71	87	0	--	--	--	<10	--	.05	.13	.05
SEP 03...	--	81	83	101	0	--	--	--	<10	--	<.04	.10	.08
DATE	NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHODIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 14...	<.008	<.06	<.02	<.06	<1	K2	K9	7	14	.3	<.04	<.1	<6
JAN 22...	<.008	<.06	<.02	<.06	<1	K1	K3	--	--	--	--	--	--
MAR 06...	<.008	<.06	<.02	<.06	<1	K1	<1	--	--	--	--	--	--
MAY 15...	<.008	<.06	<.02	E.04	K20	K55	160	59	184	E.2	<.04	<.1	<6
JUL 16...	<.008	<.06	.02	<.06	K3	42	K8	--	--	--	--	--	--
SEP 03...	<.008	<.06	<.02	<.06	K6	K1	76	--	--	--	--	--	--

## WHITE RIVER BASIN

07061260 EAST FORK BLACK RIVER NEAR IRONTON, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 14...	E9	<.08	<1	13.2	<.01	E.2	3	4
JAN 22...	--	--	--	--	--	--	--	--
MAR 06...	--	--	--	--	--	--	--	--
MAY 15...	40	.18	M	8.0	<.01	<.3	2	2
JUL 16...	--	--	--	--	--	--	--	--
SEP 03...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

07061270 EAST FORK BLACK RIVER NEAR LESTERVILLE, MO

LOCATION.--Lat 37°33'08", long 90°50'32", in SW ¼ NW ¼ SW ¼ sec.9, T.33 N., R.2 E., Reynolds County, Hydrologic Unit 11010007, on bridge on Highway N, approximately 5 miles north of junction of Highways 21 and N, 0.5 mi north of Johnson's Shut In Park entrance.

DRAINAGE AREA.--52.2 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for discharges above 5,000 ft<sup>3</sup>/s, which are poor. U.S.G.S. satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum stage 13.32 ft, discharge unknown, May 12; minimum discharge, 1.8 ft<sup>3</sup>/s, Sept. 14.

DISCHARGE from DCP, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e6.0	7.5	91	15	591	41	55	117	29	9.2	6.5	9.8
2	6.0	7.9	58	14	194	52	50	132	26	8.7	6.8	9.3
3	6.0	7.5	45	13	121	89	45	110	23	11	6.5	8.4
4	6.0	8.5	37	12	87	77	41	88	21	9.5	5.5	7.7
5	7.1	9.7	32	11	69	68	36	73	23	8.9	5.1	7.1
6	7.0	9.6	39	11	59	63	33	67	22	8.4	4.8	6.6
7	6.6	8.3	40	10	52	58	33	110	20	7.8	4.7	5.7
8	6.6	6.5	35	9.2	47	53	480	5450	18	7.7	4.4	4.8
9	6.6	6.0	30	9.0	42	1930	258	1040	20	7.3	4.3	4.4
10	7.0	5.5	27	9.0	37	339	146	312	25	15	4.1	4.3
11	8.8	e5.4	24	8.8	33	202	105	170	32	23	8.0	3.8
12	11	e5.1	25	8.5	30	228	91	3630	46	16	6.5	3.5
13	8.6	5.1	30	8.1	27	158	128	3600	44	15	12	2.5
14	8.1	5.0	241	8.0	24	119	732	369	31	13	12	2.7
15	7.7	4.8	155	7.9	23	150	254	179	26	13	9.2	4.0
16	8.8	4.7	e900	6.6	21	299	154	160	24	12	8.6	3.3
17	8.0	4.6	e1100	6.6	20	169	111	6080 <sup>a</sup>	22	12	8.0	5.9
18	7.5	4.6	291	6.7	19	121	89	500	19	12	12	9.2
19	7.3	4.5	150	7.4	227	662	241	201	18	12	14	7.0
20	7.1	4.3	97	6.7	402	693	256	128	16	11	109	16
21	7.4	4.3	73	6.8	171	269	233	100	14	11	46	19
22	7.6	4.3	61	7.2	107	160	150	88	13	10	30	15
23	8.8	4.6	51	9.8	81	118	111	73	12	11	25	13
24	10	13	43	45	67	96	292	58	12	9.9	24	11
25	10	13	38	47	59	142	350	48	11	9.9	21	9.8
26	9.8	12	33	40	53	141	170	42	10	9.3	17	9.2
27	9.4	12	29	33	47	108	211	37	10	9.1	15	8.3
28	8.8	14	26	29	43	91	684	42	12	7.8	14	7.0
29	8.4	32	23	27	---	80	210	46	9.9	7.4	13	6.4
30	8.0	244	20	29	---	71	138	38	9.5	7.0	12	6.1
31	7.7	---	17	756	---	62	---	33	---	6.8	11	---
MEAN	7.86	15.9	124	39.3	98.3	223	196	746	20.6	10.7	15.5	7.69
MAX	11	244	1100	756	591	1930	732	6080	46	23	109	19
MIN	6.0	4.3	17	6.6	19	41	33	33	9.5	6.8	4.1	2.5

e Estimated  
a Rated poor.

07061280 TAUM SAUK CREEK NEAR LESTERVILLE, MO

LOCATION.--Lat 37°32'11", long 90°48'07", in NE ¼ SW ¼ SW ¼ sec.14, T.33 N., R.2 E., Reynolds County, Hydrologic Unit 11010007, approximately 8.5 mi northeast of Lesterville.

DRAINAGE AREA.--10.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 8, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records poor.

EXTREMES FOR CURRENT YEAR.--For period Aug. 8 to Sept. 30, maximum discharge, 1.7 ft<sup>3</sup>/s, Aug. 8, gage height 1.54 ft; minimum, 0.02 ft<sup>3</sup>/s, Sept. 30.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

[illegible]

07061280 TAUM SAUK CREEK NEAR LESTERVILLE, MO--Continued

LOCATION.--Lat 37°32'11", long 90°48'07", in NE 1/4 SW 1/4 SW 1/4 sec.14, T.33 N., R.2 E., Reynolds County, Hydrologic Unit 11010007, approximately 8.5 mi northeast of Lesterville.

DRAINAGE AREA.--10.1 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 8, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.03	0.22	34	2.0	132	5.6	7.1	24	1.0	0.17	0.19	0.06
2	0.02	0.25	20	1.9	40	16	6.4	20	0.83	0.16	0.19	0.04
3	0.02	0.26	14	1.8	21	27	5.7	16	0.68	0.17	0.17	0.04
4	0.01	0.26	11	1.7	14	17	5.0	13	0.60	0.17	0.16	0.04
5	0.01	0.24	8.2	1.6	9.9	14	4.3	11	0.62	0.16	0.15	0.04
6	0.01	0.24	15	1.6	7.9	12	3.8	11	0.65	0.16	0.14	0.04
7	0.01	0.23	19	1.6	6.9	10	3.8	55	0.69	0.16	0.12	0.04
8	0.01	0.22	15	1.6	5.9	9.8	163	915	0.72	0.16	0.11	0.04
9	0.02	0.22	12	1.6	5.2	589	52	198	0.79	0.17	0.09	0.04
10	0.03	0.21	9.7	1.6	4.6	63	25	57	0.83	0.20	0.08	0.03
11	0.07	0.20	7.6	1.7	4.0	41	16	31	0.78	0.20	0.14	0.03
12	0.09	0.20	7.5	2.1	3.5	57	32	862	0.73	0.23	0.09	0.03
13	0.10	0.19	27	2.2	3.2	31	63	410	0.68	0.25	0.18	0.02
14	0.12	0.18	114	2.1	2.9	22	212	70	0.59	0.26	0.18	0.03
15	0.13	0.17	51	2.1	2.6	17	50	37	0.48	0.27	0.22	0.03
16	0.15	0.16	331	2.0	2.5	24	27	191	0.40	0.28	0.22	0.03
17	0.13	0.16	270	1.9	2.3	18	19	871	0.32	0.31	0.24	0.03
18	0.13	0.15	58	1.9	2.2	15	15	85	0.27	0.32	0.28	0.03
19	0.13	0.15	27	1.9	102	150	43	31	0.26	0.33	0.30	0.04
20	0.13	0.14	15	1.9	96	132	54	16	0.25	0.35	37	0.07
21	0.12	0.13	11	1.9	32	41	38	11	0.24	0.36	8.2	4.7
22	0.12	0.13	8.3	2.7	17	22	28	7.5	0.23	0.36	4.3	3.7
23	0.16	0.13	7.1	7.7	12	16	19	5.4	0.23	0.37	2.7	2.5
24	0.14	4.0	5.8	41	9.0	13	36	4.0	0.22	0.36	2.4	1.8
25	0.16	11	4.8	21	7.4	22	41	3.0	0.21	0.33	1.6	1.2
26	0.17	8.3	4.0	13	7.3	22	24	2.3	0.21	0.30	1.2	0.91
27	0.18	5.8	3.5	9.8	6.4	17	34	1.7	0.20	0.30	0.91	0.61
28	0.20	6.7	3.0	7.7	5.9	13	55	1.5	0.19	0.27	0.63	0.37
29	0.18	67	2.6	6.5	---	12	29	1.4	0.19	0.25	0.42	0.19
30	0.18	113	2.4	6.5	---	9.7	20	1.3	0.18	0.23	0.25	0.10
31	0.19	---	2.2	270	---	8.3	---	1.1	---	0.21	0.13	---
MEAN	0.10	7.34	36.2	13.0	20.2	47.3	37.7	128	0.48	0.25	2.03	0.56
MAX	0.20	113	331	270	132	589	212	915	1.0	0.37	37	4.7
MIN	0.01	0.13	2.2	1.6	2.2	5.6	3.8	1.1	0.18	0.16	0.08	0.02
IN.	0.01	0.81	4.13	1.56	2.08	5.40	4.17	14.6	0.05	0.03	0.23	0.06

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## WATER YEARS 2001 - 2002

ANNUAL MEAN	24.6	24.6
HIGHEST ANNUAL MEAN		24.7
LOWEST ANNUAL MEAN		24.7
HIGHEST DAILY MEAN	915	915
LOWEST DAILY MEAN	0.01	0.01
ANNUAL SEVEN-DAY MINIMUM	0.01	0.01
MAXIMUM PEAK FLOW	8970	8970
MAXIMUM PEAK STAGE	9.99	9.99
INSTANTANEOUS LOW FLOW	0.01	0.01
ANNUAL RUNOFF (INCHES)	33.14	33.16
10 PERCENT EXCEEDS	41	41
50 PERCENT EXCEEDS	1.9	1.9
90 PERCENT EXCEEDS	0.10	0.10

## WHITE RIVER BASIN

07061500 BLACK RIVER NEAR ANNAPOLIS, MO

LOCATION.--Lat 37°20'10", long 90°47'19", in SW ¼ NW ¼ sec.25, T.31 N., R.2 E., Reynolds County, Hydrologic Unit 11010007, on right bank 0.4 mi downstream from Mayberry Branch, 7 mi southwest of Annapolis, 11 mi downstream from East Fork Black River, and at mile 278.5.

DRAINAGE AREA.--484 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1939 to current year.

GAGE.--Water-stage recorder. Datum of gage is 569.72 ft above National Geodetic Vertical Datum of 1929 (levels by the U.S. Army Corps of Engineers). Prior to Aug. 21, 1942, at site 415 ft upstream at same datum.

REMARKS.--Records good. Flow slightly regulated by upstream reservoir since February 1963. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	99	171	953	220	5730	360	544	811	487	181	161	162
2	110	160	518	208	2850	407	483	898	441	176	154	158
3	122	154	507	202	1530	481	487	683	406	173	153	154
4	110	150	451	203	1090	607	441	705	379	176	148	155
5	108	147	356	199	737	591	406	615	387	187	144	162
6	108	145	370	202	645	509	376	620	404	186	140	164
7	111	143	381	199	628	542	369	693	374	182	136	156
8	113	141	336	196	503	460	1890	24400	333	180	133	147
9	125	139	300	192	437	7060	2640	12900	337	179	130	143
10	137	136	286	185	386	5730	1620	5570	378	174	129	140
11	154	133	347	184	399	2790	1180	3010	375	181	145	138
12	178	132	281	184	387	1870	1010	2400	396	233	151	137
13	188	131	307	179	316	1760	1620	34100	414	273	181	135
14	172	131	580	175	300	1310	2940	6580	456	262	271	136
15	157	129	1160	169	285	1130	2320	2930	333	244	295	140
16	151	129	1720	161	269	1350	1550	1820	306	217	259	140
17	144	129	9530	157	256	1270	1190	25000	286	200	236	150
18	141	128	4780	157	247	1270	1010	9800	276	193	223	162
19	137	127	2390	167	312	1680	987	3370	268	190	231	182
20	132	125	1260	168	1490	6680	1920	2170	258	190	254	238
21	130	125	905	164	1190	3380	1890	1740	240	187	343	236
22	128	139	753	164	847	1880	1690	1590	225	178	354	228
23	134	146	634	178	731	1360	1290	1080	217	211	289	210
24	209	192	478	225	638	1120	1300	819	210	221	252	187
25	207	206	412	348	480	1170	1820	733	210	198	236	261
26	204	213	448	360	433	1180	1360	654	204	184	225	423
27	190	203	429	334	421	1070	1130	614	200	182	205	271
28	176	202	318	438	416	888	1710	669	203	190	182	202
29	166	263	275	402	---	834	1380	676	195	170	172	177
30	159	1070	253	329	---	789	876	626	188	166	174	168
31	166	---	235	1080	---	754	---	565	---	163	169	---
MEAN	147	185	1031	249	856	1687	1314	4801	313	194	202	182
MAX	209	1070	9530	1080	5730	7060	2940	34100	487	273	354	423
MIN	99	125	235	157	247	360	369	565	188	163	129	135
IN.	0.35	0.43	2.46	0.59	1.84	4.02	3.03	11.4	0.72	0.46	0.48	0.42

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1939 - 2002, BY WATER YEAR (WY)

	MEAN	263	645	676	601	749	1004	1159	927	509	292	209	226
MAX	1151	3619	3913	2509	2091	2903	3467	4801	4263	1800	1289	1061	
(WY)	1942	1986	1983	1950	1985	1945	1957	2002	1945	1951	1982	1993	
MIN	84.8	111	119	108	147	161	228	165	140	88.5	76.7	72.4	
(WY)	1957	1965	1956	1956	1963	1941	2000	2000	1972	1954	1965	1955	

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1939 - 2002

ANNUAL MEAN	364	936	605	
HIGHEST ANNUAL MEAN			1420	1985
LOWEST ANNUAL MEAN			235	2000
HIGHEST DAILY MEAN	9530	Dec 17	34100	May 13
LOWEST DAILY MEAN	99	Oct 1	99	Oct 1
ANNUAL SEVEN-DAY MINIMUM	103	Sep 25	110	Oct 1
MAXIMUM PEAK FLOW	---		59800	May 13
MAXIMUM PEAK STAGE	---		21.40	May 13
INSTANTANEOUS LOW FLOW	---		97	Oct 1
ANNUAL RUNOFF (INCHES)	10.20		26.24	
10 PERCENT EXCEEDS	651		1700	
50 PERCENT EXCEEDS	195		263	
90 PERCENT EXCEEDS	114		139	



07061600 BLACK RIVER BELOW ANNAPOLIS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°19'30", long 90°45'50", in NE ¼ SE ¼ NW ¼ sec.3, T.31 N., R.31 E., Reynolds County, Hydrologic Unit 11010007, approximately 4.5 mi southwest of Annapolis at the bridge on County Highway K.

DRAINAGE AREA.--493 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1993 to September 1995, November 1999 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 13...	1125	ENVIRONMENTAL	114	10.6	98	7.7	312	11.2	170	33.1	20.4	.29		
JAN 23...	1300	ENVIRONMENTAL	161	12.0	105	7.8	275	8.4	--	--	--	--		
MAR 06...	1125	ENVIRONMENTAL	516	11.4	95	7.7	233	7.2	--	--	--	--		
MAY 14...	1505	ENVIRONMENTAL	6630	8.8	91	7.3	109	16.3	54	11.6	6.10	.42		
JUL 15...	1250	ENVIRONMENTAL	433	8.0	98	7.7	265	24.5	--	--	--	--		
SEP 05...	1030	ENVIRONMENTAL	300	7.2	88	7.7	296	24.4	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 13...	3.77	139	140	171	0	5.20	.2	20.3	12	148	<.04	<.10	.06	
JAN 23...	--	112	112	137	0	--	--	--	<10	--	<.04	<.10	.23	
MAR 06...	--	88	89	109	0	--	--	--	<10	--	<.04	<.10	.17	
MAY 14...	2.11	47	47	57	0	1.67	<.1	10.5	36	87	<.04	.31	.08	
JUL 15...	--	130	132	161	0	--	--	--	<40	--	<.04	<.10	.08	
SEP 05...	--	127	128	156	0	--	--	--	<10	--	<.04	E.06	.06	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHODIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 13...	<.008	<.06	<.02	<.06	K1	K5	K1	7	9	E.1	<.04	<.1	<6	
JAN 23...	<.008	<.06	<.02	<.06	<1	<1	K3	--	--	--	--	--	--	
MAR 06...	<.008	<.06	<.02	<.06	<1	K2	<1	--	--	--	--	--	--	
MAY 14...	E.004	<.06	<.02	E.06	K70	197	447	146	791	.3	E.03	<.1	<6	
JUL 15...	<.008	<.06	<.02	<.06	K1	K13	K6	--	--	--	--	--	--	
SEP 05...	<.008	<.06	<.02	<.06	K4	K8	K16	--	--	--	--	--	--	

## WHITE RIVER BASIN

07061600 BLACK RIVER BELOW ANNAPOLIS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
13...	<10	<.08	<1	E2.1	<.01	E.2	--	1
JAN								
23...	--	--	--	--	--	--	--	--
MAR								
06...	--	--	--	--	--	--	--	--
MAY								
14...	131	2.69	12	14.4	E.01	E.2	--	13
JUL								
15...	--	--	--	--	--	--	--	--
SEP								
05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07061900 LOGAN CREEK AT ELLINGTON, MO

LOCATION.--Lat 37°14'47", long 90°57'55", in SE ¼ NW ¼ NE ¼, sec.32, T.30 N., R.1 E., Reynolds County, Hydrologic Unit 11010007, on downstream end of center pier of bridge on State Route 21, 0.1 mi downstream from Dry Valley Creek, and about 10 mi upstream from Clearwater Lake.

DRAINAGE AREA.--139 mi<sup>2</sup>.

PERIOD OF RECORD.--July 21, 1994 to current year.

GAGE.--Water-stage recorder. Datum of gage is 639.51 ft above National Geodetic Vertical Datum of 1929.

REMARKS.--Records poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	0.62	e1.7	1.8	10	175	8.4	28	75	e33	8.9	4.2	4.5
2	0.60	e1.6	1.7	7.7	45	12	25	48	e30	9.3	3.6	4.4
3	0.47	e1.5	1.7	6.0	29	11	21	36	28	8.7	3.3	4.3
4	0.42	e1.5	2.1	5.2	26	9.6	18	30	24	8.3	3.2	4.2
5	0.50	e1.4	2.2	5.7	23	8.8	16	24	29	8.1	3.2	4.1
6	0.52	e1.3	2.8	5.7	22	8.3	15	24	23	7.6	3.1	3.9
7	e0.53	e1.2	2.6	5.7	20	9.1	21	44	19	7.2	3.1	3.8
8	0.52	e1.2	2.5	6.6	18	9.6	260	4550	17	7.0	3.0	3.8
9	0.51	e1.2	2.4	6.1	17	845	103	1760	26	6.6	2.8	3.6
10	e0.49	e1.1	2.5	6.5	16	166	56	963	29	12	2.8	3.6
11	0.67	e1.1	2.5	5.1	14	58	43	483	23	10	3.9	3.4
12	0.73	e1.0	2.9	4.7	12	50	39	505	22	8.6	3.3	3.3
13	0.81	e0.99	3.3	5.7	12	37	38	3510	21	8.1	5.4	3.4
14	e0.73	e0.94	5.4	5.3	12	32	47	1270	18	7.6	4.6	3.1
15	e0.70	e0.90	4.3	5.9	12	32	40	554	17	7.3	4.2	3.1
16	e0.69	e0.86	33	5.7	11	33	37	412	17	7.1	3.9	3.2
17	e0.67	e0.83	1050	5.5	9.7	28	34	7970	16	6.7	3.9	3.0
18	e0.65	e0.82	145	5.4	8.4	24	27	1900	16	7.2	3.9	3.2
19	e0.63	e0.85	62	5.8	13	78	27	654	15	6.8	4.1	3.4
20	e0.65	e0.99	47	5.3	15	478	30	300	14	6.1	4.1	4.8
21	e0.72	1.3	31	5.2	12	168	36	e155	13	5.4	3.9	3.6
22	e0.82	1.3	24	4.9	11	82	29	e102	12	5.6	3.6	3.0
23	e0.92	1.4	19	5.9	10	64	27	e83	12	5.5	5.2	2.8
24	e2.3	2.2	19	8.6	9.6	46	403	e66	11	4.9	9.0	2.9
25	e3.8	1.5	12	7.7	9.9	68	127	e58	10	4.5	5.6	3.0
26	e3.0	1.4	12	7.0	9.5	69	83	e52	11	4.5	5.2	3.0
27	e2.6	1.3	14	6.5	9.1	51	68	e46	11	4.3	5.3	3.0
28	e2.3	1.6	14	6.3	8.9	45	68	e44	14	4.4	5.1	2.8
29	e2.1	1.8	14	6.5	---	40	40	e41	11	4.1	5.0	2.9
30	e1.9	1.9	12	6.5	---	35	60	e38	9.6	4.8	4.8	2.4
31	e1.8	---	7.1	91	---	31	---	e35	---	4.2	4.7	---
MEAN	1.11	1.29	50.2	8.89	21.1	85.1	62.2	833	18.4	6.82	4.23	3.45
MAX	3.8	2.2	1050	91	175	845	403	7970	33	12	9.0	4.8
MIN	0.42	0.82	1.7	4.7	8.4	8.3	15	24	9.6	4.1	2.8	2.4

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1994 - 2002, BY WATER YEAR (WY)

	4.82	17.0	14.9	11.7	45.8	37.6	65.3	150	29.5	8.76	6.18	6.24
MEAN	4.82	17.0	14.9	11.7	45.8	37.6	65.3	150	29.5	8.76	6.18	6.24
MAX	14.6	93.7	50.2	21.8	201	85.1	225	833	138	28.3	23.2	27.9
(WY)	1997	1997	2002	1999	1999	2002	1999	2002	1998	1998	1998	1996
MIN	0.93	1.29	3.18	3.63	7.36	7.25	5.26	3.45	4.09	2.38	1.33	0.74
(WY)	2001	2002	2001	2001	1996	2001	2000	2000	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1994 - 2002
ANNUAL MEAN	8.90	92.7	33.0
HIGHEST ANNUAL MEAN			92.7
LOWEST ANNUAL MEAN			4.94
HIGHEST DAILY MEAN	1050	Dec 17	7970
LOWEST DAILY MEAN	0.42	Oct 4	0.42
ANNUAL SEVEN-DAY MINIMUM	0.50	Oct 3	0.50
MAXIMUM PEAK FLOW	---		16300
MAXIMUM PEAK STAGE	---		13.22
INSTANTANEOUS LOW FLOW	---		0.42
10 PERCENT EXCEEDS	10		67
50 PERCENT EXCEEDS	3.3		7.3
90 PERCENT EXCEEDS	0.73		1.2

e Estimated

## WHITE RIVER BASIN

07062000 CLEARWATER LAKE NEAR PIEDMONT, MO

LOCATION.--Lat 37°08'00", long 90°46'31", NW ¼ sec.6, T.28 N., R.3 E., Wayne County, Hydrologic Unit 11010007, in intake tower at dam on Black River, 2.3 mi upstream from Brewer Bay, 4.5 mi west of Piedmont, and at mile 257.4.

DRAINAGE AREA.--898 mi<sup>2</sup>.

PERIOD OF RECORD.--June 1948 to current year.

GAGE.--Water-stage recorder. Datum of gage is National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers).

REMARKS.--Lake is formed by earthfill type dam. Storage began June 3, 1948; conservation pool level reached July 4, 1948. Capacity at crest of spillway 413,700 ac-ft at elevation 567.0 ft, of which 391,800 ac-ft is available for flood-control storage, and 21,920 ac-ft is permanent storage which under normal operating conditions will be maintained for purposes of conservation and recreation at elevation 494.0 ft. Lake is used for flood control and recreational purposes. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES FOR PERIOD OF RECORD.--Maximum contents, 409,700 ac-ft, May 20, 2002, elevation, 566.60 ft; minimum, since initial filling to conservation pool level, 15,800 ac-ft, Jan. 20, 23, 1972, elevation, 490.00 ft.

EXTREMES FOR CURRENT YEAR.--Maximum contents, 409,700 ac-ft, May 20, elevation, 566.60 ft; minimum, 20,800 ac-ft, Feb. 14, elevation, 493.31 ft.

ELEVATION, IN FEET, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
OBSERVATION AT 2400

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	499.86	500.03	497.03	493.93	502.19	493.42	512.86	511.48	562.05	540.54	500.20	500.17
2	499.85	499.78	497.75	493.85	505.13	493.55	511.31	511.36	561.45	539.53	500.20	500.17
3	499.84	499.46	497.27	493.68	505.08	493.66	509.60	510.58	560.83	538.53	500.23	500.16
4	499.84	499.11	496.10	493.59	503.87	493.79	507.75	509.37	560.21	537.47	500.25	500.15
5	499.87	498.75	494.78	493.56	501.88	493.86	505.76	508.06	559.62	536.40	500.26	500.13
6	499.90	498.37	494.31	493.57	499.61	493.65	503.61	506.53	558.97	535.30	500.26	500.13
7	499.90	497.87	494.31	493.54	497.88	493.44	502.06	505.57	558.31	534.19	500.24	500.13
8	499.90	497.40	494.29	493.50	496.84	493.40	504.38	521.28	557.64	533.04	500.23	500.14
9	499.89	496.88	494.18	493.49	495.98	499.78	506.74	530.14	557.21	531.87	500.18	500.14
10	499.97	496.39	493.99	493.51	495.03	507.42	506.79	532.95	557.08	530.89	500.16	500.14
11	500.09	495.90	493.78	493.51	494.21	509.38	505.92	534.38	556.57	529.95	500.18	500.13
12	500.18	495.39	493.66	493.52	493.82	509.44	505.19	535.81	556.05	528.79	500.21	500.11
13	500.33	494.86	493.57	493.51	493.47	509.06	505.88	548.40	555.43	527.56	500.49	500.11
14	500.43	494.45	493.70	493.51	493.31	508.06	507.55	551.07	554.78	526.30	500.64	500.15
15	500.45	494.32	494.61	493.51	493.39	507.24	508.79	552.12	554.09	525.02	500.54	500.19
16	500.24	494.26	496.24	493.49	493.49	508.53	508.76	552.75	553.41	523.65	500.35	500.21
17	499.97	494.23	505.57	493.46	493.57	509.71	508.04	562.93	552.67	522.23	500.34	500.21
18	499.90	494.20	510.29	493.47	493.61	510.14	506.96	565.84	551.92	520.74	500.37	500.22
19	499.91	494.17	510.86	493.50	493.92	511.32	506.00	566.50	551.14	519.17	500.35	500.26
20	499.94	494.15	509.95	493.53	494.69	516.59	506.82	566.60	550.37	517.53	500.34	500.33
21	499.97	494.15	508.49	493.55	495.08	518.87	507.78	566.49	549.55	515.83	500.34	500.28
22	500.00	494.14	506.84	493.55	495.10	519.04	508.11	566.31	548.73	514.03	500.42	500.21
23	500.05	494.13	505.00	493.61	495.19	518.52	507.23	565.99	547.89	512.11	500.44	500.17
24	500.13	494.13	502.96	493.87	495.16	517.62	509.24	565.60	547.03	510.08	500.78	500.15
25	500.15	494.13	500.70	494.00	494.64	517.54	510.82	565.17	546.16	508.13	501.03	500.11
26	500.15	494.31	498.28	494.08	493.86	518.63	511.51	564.70	545.26	506.37	500.80	500.20
27	500.16	494.28	496.49	494.13	493.55	518.65	511.85	564.20	544.36	504.65	500.36	500.36
28	500.15	494.32	495.61	494.05	493.44	517.75	512.39	563.88	543.43	502.82	500.20	500.31
29	500.15	494.74	494.94	494.03	---	516.65	512.37	563.60	542.49	501.26	500.17	500.21
30	500.14	495.52	494.21	493.90	---	515.50	511.66	563.16	541.53	500.62	500.16	500.06
31	500.12	---	493.91	494.95	---	514.23	---	562.62	---	500.35	500.17	---
MEAN	500.05	495.79	498.51	493.71	496.32	508.01	508.12	545.01	552.87	521.77	500.35	500.18
MAX	500.45	500.03	510.86	494.95	505.13	519.04	512.86	566.60	562.05	540.54	501.03	500.36
MIN	499.84	494.13	493.57	493.46	493.31	493.40	502.06	505.57	541.53	500.35	500.16	500.06
(-)	33000	24400	21800	23500	21000	70500	62300	370100	202400	33400	33100	32900
(=)	+500	-8600	-2600	+1700	-2500	+49500	-8200	+307800	-167700	-169000	-300	-200

CAL YR 2001....-1200

WTR YR 2002....+ 400

(-) Contents, in acre-feet, at the end of the month.

(=) Change in contents, in acre-feet.

## 07063000 BLACK RIVER AT POPLAR BLUFF, MO

LOCATION.--Lat 36°45'34", long 90°23'17", in SW ¼ NW ¼ sec.2, T.24 N., R.6 E., Butler County, Hydrologic Unit 11010007, on right bank at City Light and Water Plant in Poplar Bluff, 1,500 ft upstream from bridge on Business Route 60, 4.8 mi downstream from Indian Creek, and at mile 211.2.

DRAINAGE AREA.--1,245 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1936 to September 1937, October 1939 to current year. Gage-height records collected at site 1,800 ft downstream September 1923 to July 1935 and since July 1935 at site 1,500 ft downstream, in reports of the National Weather Service.

REVISED RECORDS.--WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 317.48 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1940, nonrecording gage at site 1,500 ft downstream at datum 2.00 ft higher; Oct. 1, 1940, to June 7, 1955, at site 1,500 ft downstream at present datum. Prior to July 12, 1985, at datum 0.10 ft lower.

REMARKS.--Records good. Considerable regulation by Clearwater Lake (07062000), 46 mi upstream since June 3, 1948. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a maximum discharge of 100,000 ft<sup>3</sup>/s, and flood of Mar. 12, 1935, reached a stage of 21.1 ft, present datum (affected by levees constructed since 1904).

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	251	403	1110	1320	4610	1270	4200	3470	3970	3940	1320	559
2	249	468	747	979	3130	1180	4090	2860	4090	3940	1120	534
3	249	684	619	931	2120	1140	4040	2640	4090	3960	900	519
4	248	730	931	930	2900	1090	4020	3090	4070	3940	781	509
5	267	744	1720	873	3530	1100	3970	3570	4140	3940	700	501
6	287	751	1900	819	3910	1200	3940	3570	4250	3920	659	e490
7	262	772	1580	787	3970	1310	3890	3760	4170	3910	628	e474
8	255	830	1470	752	3530	1340	3670	5300	4120	3880	599	e460
9	253	841	1130	732	2670	2200	2690	11000	4090	3860	581	e446
10	265	843	970	704	2210	4010	2440	8500	4110	3880	561	443
11	456	845	932	659	2070	2170	3280	4270	3130	3830	536	429
12	365	838	980	637	1880	2410	3740	2310	3450	3370	522	425
13	405	834	1110	624	1580	3320	3650	4860	3980	3780	574	422
14	549	830	1340	606	1400	3680	4380	6660	4210	3870	730	414
15	375	727	1290	592	1220	3890	4690	4180	4210	3860	599	391
16	391	491	2320	579	1010	4070	3720	2460	4140	3850	691	384
17	629	427	6150	573	892	2410	3680	3910	4140	3860	942	387
18	663	404	6110	572	840	1480	3830	6500	4100	3860	759	424
19	451	393	3490	580	889	2580	3980	4850	4080	3870	720	443
20	355	386	3300	549	1860	5960	3680	3950	4060	3890	711	651
21	330	372	3750	532	1620	5560	2710	4060	4060	3880	697	612
22	316	352	3920	536	2000	3600	2330	4300	4040	3840	687	607
23	306	332	3960	706	1840	3740	2650	4350	4020	3820	680	610
24	306	357	3860	4330	1630	4000	3700	4290	3990	3840	820	595
25	326	376	3750	2370	1580	4690	4790	4230	3980	3830	755	540
26	384	357	3640	1280	1730	6560	2870	4180	4000	3670	529	529
27	395	412	3530	1200	1800	4890	2700	4160	3990	3290	652	524
28	413	587	3040	1120	1480	3670	2620	4190	4170	3020	1040	521
29	402	1080	2170	1130	---	4310	2480	4090	4060	2930	894	595
30	400	1580	1690	1190	---	4430	2930	3500	3980	2640	684	607
31	400	---	1580	1720	---	4330	---	3570	---	1900	608	---
MEAN	361	635	2390	997	2139	3148	3512	4407	4030	3673	732	502
MAX	663	1580	6150	4330	4610	6560	4790	11000	4250	3960	1320	651
MIN	248	332	619	532	840	1090	2330	2310	3130	1900	522	384
IN.	0.33	0.57	2.21	0.92	1.79	2.92	3.15	4.08	3.61	3.40	0.68	0.45

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1949 - 2002<sup>a</sup>, BY WATER YEAR (WY)

	MEAN	655	977	1533	1654	1758	2144	2219	1945	1328	907	686	639
MAX	1913	2962	5501	3890	4938	4485	4873	4407	4030	3673	3232	2071	
(WY)	1983	1973	1983	1950	1949	1975	1973	2002	2002	2002	1957	1985	
MIN	259	315	335	309	376	564	676	375	434	321	288	268	
(WY)	1957	1954	1954	1956	1963	1981	2000	2001	2001	1954	1954	1954	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 1949 - 2002 <sup>a</sup>		
ANNUAL MEAN	865			2212			1368		
HIGHEST ANNUAL MEAN							2858		
LOWEST ANNUAL MEAN							564		
HIGHEST DAILY MEAN	6150	Dec 17		11000	May 9		41200	Dec 4	1982
LOWEST DAILY MEAN	248	Oct 4		248	Oct 4		186	Sep 25	1966
ANNUAL SEVEN-DAY MINIMUM	252	Sep 28		259	Oct 1		245	Sep 21	1966
MAXIMUM PEAK FLOW	---			13200	May 9		65600 <sup>b</sup>	Dec 4	1982
MAXIMUM PEAK STAGE	---			18.45	May 9		21.68 <sup>c</sup>	Dec 4	1982
INSTANTANEOUS LOW FLOW	---			246	Oct 1, 3-5		180	Sep 25	1966
ANNUAL RUNOFF (INCHES)	9.44			24.12			14.93		
10 PERCENT EXCEEDS	1660			4160			3320		
50 PERCENT EXCEEDS	490			1620			834		
90 PERCENT EXCEEDS	299			404			384		

<sup>a</sup> Post-regulation period.

<sup>b</sup> Determined by indirect measurement.

<sup>c</sup> Former datum.

## WHITE RIVER BASIN

07064533 CURRENT RIVER ABOVE AKERS, MO

LOCATION.--Lat 37°22'32", long 91°33'09", in NE ¼ NW ¼ NW ¼ sec.24, T.31 N., R.6 W., Shannon County, Hydrologic Unit 11010008, on left bank 200 ft above ferry crossing at Akers on Highway K, approximately 20 mi north of Summersville, behind old icehouse behind Akers Ferry General Store.

DRAINAGE AREA.--295 mi<sup>2</sup>.

PERIOD OF RECORD.--Aug. 14, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records poor. U.S.G.S. satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--For period Aug. 14 to Sept. 30, maximum discharge, 186 ft<sup>3</sup>/s, Sept. 9, gage height 1.09 ft; minimum, 130 ft<sup>3</sup>/s, several days.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

[illegible]

## 07064533 CURRENT RIVER ABOVE AKERS, MO--Continued

LOCATION.--Lat 37°22'32", long 91°33'09", in NE ¼ NW ¼ NW ¼ sec.24, T.31 N., R.6 W., Shannon County, Hydrologic Unit 11010008, on left bank 200 ft above ferry crossing at Akers on Highway K, approximately 20 mi north of Summersville, behind old icehouse behind Akers Ferry General Store.

DRAINAGE AREA.--295 mi<sup>2</sup>.

PERIOD OF RECORD.--July 19, 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	131	138	223	197	1970	203	621	579	726	343	241	234
2	131	140	196	192	1110	237	598	562	675	340	245	224
3	132	135	184	186	849	313	556	544	639	338	239	220
4	133	132	177	182	666	306	520	509	609	338	235	217
5	140	133	172	182	546	297	499	471	591	334	235	216
6	134	132	169	181	488	298	486	476	568	330	234	214
7	130	132	165	175	424	298	486	645	546	327	234	214
8	130	132	161	173	378	294	948	12700	528	321	232	214
9	131	131	155	172	350	734	1140	3300	512	318	233	216
10	135	132	153	169	328	946	924	2080	527	334	238	217
11	142	131	151	165	298	763	818	1600	523	324	241	217
12	139	131	164	163	282	793	754	2120	493	295	243	214
13	142	133	192	162	261	754	712	8870	508	296	269	215
14	138	133	198	159	248	668	1940	2460	507	286	279	219
15	137	133	192	153	241	605	1130	1820	485	280	261	215
16	137	132	324	151	232	729	866	1590	463	276	251	213
17	135	132	1190	150	223	693	800	8270	446	272	262	219
18	136	134	1010	149	217	611	720	4370	432	270	246	217
19	136	134	710	152	233	917	665	2260	420	273	249	230
20	137	131	534	147	280	2250	747	1790	409	268	301	247
21	136	132	433	146	277	1640	1000	1540	400	264	328	230
22	136	133	387	143	253	1320	932	1380	392	261	278	220
23	149	137	345	153	241	1140	826	1260	385	262	261	212
24	151	160	311	253	237	1010	801	1180	381	256	256	214
25	145	172	287	264	232	953	787	1100	376	254	249	209
26	136	163	269	230	221	941	692	1020	371	253	244	211
27	134	156	250	212	211	868	658	966	367	251	245	211
28	132	159	237	201	206	819	666	913	363	247	241	207
29	132	171	223	194	---	781	614	869	356	244	237	215
30	134	228	212	197	---	723	574	826	349	242	233	223
31	135	---	205	712	---	666	---	777	---	243	235	---
MEAN	136	142	309	196	411	760	783	2221	478	288	251	218
MAX	151	228	1190	712	1970	2250	1940	12700	726	343	328	247
MIN	130	131	151	143	206	203	486	471	349	242	232	207

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2001 - 2002, BY WATER YEAR (WY)

MEAN	136	142	309	196	411	760	783	2221	478	288	251	178
MAX	136	142	309	196	411	760	783	2221	478	288	251	218
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002
MIN	136	142	309	196	411	760	783	2221	478	288	251	138
(WY)	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2002	2001

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## WATER YEARS 2001 - 2002

ANNUAL MEAN	518	518
HIGHEST ANNUAL MEAN	518	2002
LOWEST ANNUAL MEAN	518	2002
HIGHEST DAILY MEAN	12700	May 8 2002
LOWEST DAILY MEAN	130	Oct 7,8 2001
ANNUAL SEVEN-DAY MINIMUM	132	Nov 6 2001
MAXIMUM PEAK FLOW	Unknown	May 8 2002
MAXIMUM PEAK STAGE	18.20	May 8 2002
INSTANTANEOUS LOW FLOW	129	Oct 1 2001
10 PERCENT EXCEEDS	943	
50 PERCENT EXCEEDS	253	
90 PERCENT EXCEEDS	136	

## WHITE RIVER BASIN

07065200 JACKS FORK NEAR MOUNTAIN VIEW, MO

LOCATION.--Lat 37°03'22", long 91°40'05", in NW 1/4 NE 1/4 SW 1/4 sec.36, T.28 N., R.7 W., Texas County, Hydrologic Unit 11010008, on downstream side of State Highway 17 bridge, 3.8 mi north of junction with Highway 60 and 8.6 mi south of Summersville.

DRAINAGE AREA.--185 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good except estimated daily discharges, which are poor. U.S.G.S. satellite telemeter at station.

EXTREMES FOR CURRENT YEAR.--Maximum instantaneous gage height 27.68 ft, discharge unknown, May 8; minimum discharge, 15 ft<sup>3</sup>/s, Oct. 3-5.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	16	23	84	e42	1650	71	145	202	116	45	53	41
2	16	24	65	e40	531	101	132	175	108	44	50	40
3	15	24	54	e39	334	328	114	147	100	43	47	38
4	15	23	47	e38	237	239	99	134	93	42	45	37
5	17	22	42	37	177	196	91	116	99	41	44	40
6	20	22	47	39	148	171	84	118	103	40	42	39
7	19	22	44	37	128	153	89	452	90	39	41	37
8	18	22	41	35	110	137	3010	e9400	83	38	40	35
9	17	22	38	33	98	2800	1100	e2160	80	37	39	35
10	20	22	36	33	89	918	590	1130	88	38	39	34
11	32	22	34	33	79	519	411	696	247	41	39	33
12	31	21	38	32	73	634	317	507	143	44	41	33
13	29	21	59	31	67	457	272	1450	139	51	e62	e32
14	29	21	100	31	62	340	1860	750	145	45	e88	e32
15	27	21	90	30	59	274	738	492	109	42	e74	e32
16	26	21	404	30	56	624	469	380	93	41	68	e31
17	25	21	2470	29	53	397	460	5090	84	41	61	e33
18	24	21	713	30	51	296	364	1860	77	45	56	e37
19	23	22	356	33	63	1610	291	861	71	3050	52	e39
20	23	22	222	32	261	2600	322	565	66	719	50	e46
21	22	21	158	30	236	965	560	413	62	282	e48	e62
22	22	21	125	31	176	553	339	333	59	162	e46	e58
23	22	21	103	35	142	401	260	284	55	128	e49	e48
24	25	28	85	380	121	316	528	244	53	124	e53	37
25	30	31	73	303	108	357	408	222	63	94	e62	35
26	27	33	65	192	96	398	298	191	55	79	e72	33
27	26	32	59	140	84	331	274	171	53	70	59	33
28	25	38	55	111	76	285	307	155	51	63	52	32
29	23	53	51	94	---	251	260	149	49	57	48	31
30	23	77	47	85	---	201	214	138	48	55	46	30
31	23	---	e44	1360	---	168	---	126	---	55	42	---
MEAN	22.9	26.5	189	111	192	551	480	939	89.4	184	51.9	37.4
MAX	32	77	2470	1360	1650	2800	3010	9400	247	3050	88	62
MIN	15	21	34	29	51	71	84	116	48	37	39	30

e Estimated



370857091265901 JACKS FORK ABOVE ALLEY SPRING, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°08'57", long 91°26'59", in NE ¼ SW ¼ SW ¼ sec.25, T.29 N., R.5 W., Shannon County, Hydrologic Unit 11010008, at Alley Spring Campground, 0.5 mi upstream of Highway 106 bridge, 1.0 mi upstream from Alley Spring Branch, and 5.5 mi west of Eminence.

DRAINAGE AREA.--302 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)
OCT												
02...	1500	ENVIRONMENTAL	29	8.8	102	8.1	348	21.7	<.04	<.10	E.04	<.008
10...	0830	ENVIRONMENTAL	33	7.5	80	7.6	349	17.5	<.04	<.10	.05	<.008
10...	1200	ENVIRONMENTAL	32	8.5	92	7.8	349	18.0	<.04	<.10	.05	<.008
11...	0840	ENVIRONMENTAL	40	7.3	78	7.5	344	17.5	<.04	<.10	.06	<.008
11...	1220	ENVIRONMENTAL	42	8.3	90	7.6	337	17.8	<.04	<.10	.06	<.008
NOV												
20...	1645	ENVIRONMENTAL	35	10.1	95	8.0	353	12.2	E.02	<.10	<.05	<.008
APR												
02...	1110	ENVIRONMENTAL	245	10.8	108	8.2	254	13.8	<.04	<.10	.20	<.008
30...	1200	ENVIRONMENTAL	382	9.5	100	8.1	269	16.5	<.04	E.08	.08	<.008
MAY												
29...	1025	ENVIRONMENTAL	303	10.1	112	8.2	268	18.6	<.04	E.09	.12	<.008
JUN												
04...	1045	ENVIRONMENTAL	201	8.5	103	8.0	289	23.5	<.04	E.06	.17	<.008
28...	0840	ENVIRONMENTAL	99	6.9	84	7.7	298	24.2	<.04	E.08	.15	<.008
28...	0841	REPLICATE	--	--	--	--	--	--	<.04	E.09	.15	<.008
28...	1255	ENVIRONMENTAL	99	8.0	103	7.9	307	27.0	--	--	--	--
29...	0910	ENVIRONMENTAL	92	6.9	87	7.7	317	25.2	--	--	--	--
29...	1400	ENVIRONMENTAL	90	8.2	106	8.0	316	27.9	<.04	.11	.11	<.008
JUL												
29...	1105	ENVIRONMENTAL	110	8.1	103	8.2	309	26.5	<.04	<.10	.06	<.008
AUG												
06...	0950	ENVIRONMENTAL	84	6.5	84	7.9	319	26.9	<.04	E.06	<.05	E.004
06...	1520	ENVIRONMENTAL	82	8.5	115	8.1	314	29.4	--	--	--	--
07...	0840	ENVIRONMENTAL	80	6.6	82	7.8	318	25.3	--	--	--	--
07...	1330	ENVIRONMENTAL	80	8.6	113	8.0	323	28.2	<.04	<.10	<.05	E.004

DATE	ORTHO-PHOS-PHATE, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	ENTERO-COCCI, MEI MF, WATER (col./100 mL) (90909)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)
OCT						
02...	<.02	<.004	K3	K9	K9	K8
10...	<.02	<.004	47	K113	K66	41
10...	<.02	E.003	29	67	43	35
11...	<.02	E.002	K110	K255	K143	K190
11...	<.02	<.004	61	K144	K109	85
NOV						
20...	<.02	.009	<1	--	K4	K11
APR						
02...	<.02	E.002	<1	--	<1	K9
30...	<.02	E.003	K3	28	K2	K11
MAY						
29...	<.02	E.002	K15	--	21	42
JUN						
04...	<.04	E.002	<1	43	K14	26
28...	<.02	E.003	K16	190	K12	148
28...	<.02	E.002	--	--	--	--
28...	--	--	<2	44	K8	K26
29...	--	--	K12	170	K18	90
29...	<.02	E.003	K12	64	K30	46
JUL						
29...	<.02	E.003	K2	79	K13	41
AUG						
06...	<.02	E.003	K26	130	K24	66
06...	--	--	K22	52	K32	56
07...	--	--	K12	164	K26	86
07...	<.02	E.003	K4	64	K14	112

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07065495 JACKS FORK AT ALLEY SPRING, MO

LOCATION.--Lat 37°08'53", long 91°26'35", in SW 1/4 SW 1/4 SE 1/4 sec.25, T.29 N., R.5 W., Shannon County, Hydrologic Unit 11010008, on downstream end of pier on foot bridge, just downstream of Highway 106 bridge, 0.5 mi upstream from Alley Spring Branch, and 5.5 mi west of Eminence.

DRAINAGE AREA.--298 mi<sup>2</sup>.

PERIOD OF RECORD.--March 1993 to current year.

GAGE.--Water-stage recorder. Datum of gage is 656.74 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1999, datum was 4.0 ft lower.

REMARKS.--Records good. U.S.G.S satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	29	38	106	60	2590	117	269	365	256	84	98	78
2	29	39	111	57	901	126	244	340	242	83	96	76
3	29	39	92	54	546	257	214	292	229	80	92	73
4	28	39	80	51	403	345	183	260	218	79	88	71
5	31	39	70	48	310	289	162	234	208	78	85	69
6	33	37	69	49	259	255	149	220	220	76	83	69
7	33	37	68	49	226	233	150	307	207	73	80	68
8	33	36	66	47	195	213	2610	15800	194	71	78	68
9	32	36	61	45	171	2570	2000	4090	184	70	81	66
10	33	36	57	45	153	1840	975	2200	174	71	86	65
11	40	36	53	44	136	880	670	1330	244	76	85	63
12	47	36	55	43	120	810	577	970	273	74	84	62
13	56	36	65	41	109	716	546	1840	246	81	112	62
14	54	35	88	40	100	561	1850	1480	219	81	209	60
15	50	34	128	39	89	469	1350	951	198	77	163	61
16	51	34	193	39	83	604	785	716	173	73	135	61
17	47	34	2360	38	78	596	640	5770	162	77	115	65
18	44	34	1290	39	73	478	595	3550	149	77	104	65
19	42	35	611	44	91	938	527	1570	140	960	99	65
20	40	35	399	43	233	4210	462	1060	133	2330	97	77
21	40	35	292	41	377	1800	619	770	125	483	91	90
22	39	34	233	40	300	964	567	650	119	297	87	95
23	39	34	193	44	244	663	463	560	114	218	87	79
24	39	48	161	126	209	536	570	490	110	185	106	71
25	40	49	136	431	184	512	687	438	110	168	103	66
26	42	48	118	299	165	608	523	390	114	145	126	65
27	42	49	105	223	144	557	474	348	103	130	115	65
28	40	55	91	176	127	492	465	323	97	119	101	62
29	39	72	81	148	---	441	452	303	91	110	93	59
30	39	89	73	131	---	373	388	287	88	106	86	58
31	38	---	66	214	---	313	---	271	---	102	81	---
MEAN	39.3	41.3	244	89.9	308	767	672	1554	171	217	102	68.5
MAX	56	89	2360	431	2590	4210	2610	15800	273	2330	209	95
MIN	28	34	53	38	73	117	149	220	88	70	78	58

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1993 - 2002, BY WATER YEAR (WY)

	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002
MEAN	116	314	194	200	427	461	496	504	179	115
MAX	298	1426	370	331	976	767	1121	1554	381	217
(WY)	1999	1994	1997	1995	1999	2002	1994	2002	1995	2002
MIN	39.3	41.3	76.6	74.5	81.6	159	86.5	93.5	83.3	52.2
(WY)	2002	2002	2001	2000	1996	2001	2000	2001	2001	2001

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 1993 - 2002

ANNUAL MEAN	131	358	266
HIGHEST ANNUAL MEAN			469
LOWEST ANNUAL MEAN			95.9
HIGHEST DAILY MEAN	4470	Feb 25	15800
LOWEST DAILY MEAN	23	Sep 7	28
ANNUAL SEVEN-DAY MINIMUM	25	Sep 1	30
MAXIMUM PEAK FLOW	---		40000
MAXIMUM PEAK STAGE	---		17.10
INSTANTANEOUS LOW FLOW	---		28
10 PERCENT EXCEEDS	237		677
50 PERCENT EXCEEDS	68		105
90 PERCENT EXCEEDS	30		39

## WHITE RIVER BASIN

477

370901091262001 ALLEY SPRING BELOW ALLEY, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°09'01", long 91°26'20", in NE ¼ SW ¼ SE ¼ sec.25, T.29 N., R.5 W., Shannon County, Hydrologic Unit 11010008, at Alley Spring Campground, and 5.0 mi west of Eminence.

PERIOD OF RECORD.--May 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT												
02...	1430	ENVIRONMENTAL	66	9.9	101	7.8	318	15.2	<.04	<.10	.52	<.008
10...	0900	ENVIRONMENTAL	66	9.2	92	7.5	321	14.4	<.04	<.10	.50	<.008
10...	1240	ENVIRONMENTAL	66	9.7	97	7.4	322	14.5	<.04	<.10	.51	<.008
11...	0920	ENVIRONMENTAL	66	8.8	88	7.5	320	14.2	<.04	<.10	.51	<.008
11...	1240	ENVIRONMENTAL	66	9.6	96	7.5	314	14.3	<.04	.47	.52	<.008
NOV												
20...	1600	ENVIRONMENTAL	62	9.3	92	7.7	322	14.0	<.04	<.10	.52	<.008
APR												
02...	1140	ENVIRONMENTAL	200	10.7	106	7.3	166	13.5	<.04	E.07	.69	<.008
30...	1215	ENVIRONMENTAL	250	10.3	102	7.4	176	13.5	<.04	E.06	.53	<.008
MAY												
29...	1100	ENVIRONMENTAL	293	10.1	101	7.2	179	13.6	<.04	.10	.60	<.008
JUN												
04...	1115	ENVIRONMENTAL	226	10.8	108	7.1	202	14.0	<.04	<.10	.63	<.008
28...	0955	ENVIRONMENTAL	145	10.2	101	7.3	239	13.8	<.04	E.07	.70	E.005
28...	1305	ENVIRONMENTAL	145	10.7	108	7.2	246	14.8	--	--	--	--
29...	1000	ENVIRONMENTAL	142	9.9	99	7.1	250	14.4	--	--	--	--
29...	1420	ENVIRONMENTAL	142	10.6	107	7.4	248	14.6	<.04	E.07	.72	<.008
JUL												
29...	1145	ENVIRONMENTAL	118	10.6	106	7.9	280	14.2	<.04	<.10	.76	<.008
AUG												
06...	1045	ENVIRONMENTAL	105	10.8	108	7.5	280	14.2	<.04	<.10	.75	<.008
06...	1046	REPLICATE	--	--	--	--	--	--	<.04	<.10	.76	E.004
06...	1605	ENVIRONMENTAL	105	10.5	105	7.4	278	14.4	--	--	--	--
07...	0910	ENVIRONMENTAL	105	10.2	101	7.4	280	14.1	--	--	--	--
07...	1405	ENVIRONMENTAL	105	10.8	109	7.5	286	14.7	<.04	<.10	.75	E.004

DATE	ORTHO- PHOS- PHATE, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	ENTERO- COCCI, MEI MF, WATER (col./ 100 mL) (90909)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)
OCT						
02...	<.02	.009	K4	20	K12	K17
10...	<.02	.008	K6	45	20	20
10...	<.02	.009	K6	21	K16	K17
11...	<.02	.009	K18	28	K16	24
11...	<.02	.010	K5	31	K10	31
NOV						
20...	<.02	E.002	K1	--	K6	K5
APR						
02...	<.02	.015	<1	--	K17	K10
30...	<.02	.013	46	K368	K112	K221
MAY						
29...	<.02	.021	28	--	41	81
JUN						
04...	<.04	.019	K3	57	20	31
28...	<.02	.012	52	K26	K22	K24
28...	--	--	K4	K28	K16	K20
29...	--	--	K16	K30	K10	K18
29...	<.02	.012	K2	K16	K6	K22
JUL						
29...	<.02	.013	K12	K340	56	K230
AUG						
06...	<.02	.011	K28	112	52	110
06...	<.02	.012	--	--	--	--
06...	--	--	K28	96	K32	74
07...	--	--	52	138	40	72
07...	<.02	.012	K26	58	K20	52

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

370911091223201 MAHANS CREEK ABOVE EMINENCE, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°09'11", long 91°22'32", in SW ¼ NE ¼ SW ¼ sec.27, T.29 N., R.4 W., Shannon County, Hydrologic Unit 11010008, 0.25 north of State Highway 106 on county road and 1.0 mi west of Eminence.

DRAINAGE AREA.--54.0 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to November 2001.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (per cent saturation) (00300)	pH WATER FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	
OCT												
02...	1400	ENVIRONMENTAL	3.5	9.3	102	8.0	463	18.7	<.04	E.05	.21	<.008
02...	1401	REPLICATE	--	--	--	--	--	--	<.04	<.10	.21	<.008
10...	0940	ENVIRONMENTAL	3.9	7.9	83	7.6	462	16.5	<.04	E.06	.20	<.008
10...	1330	ENVIRONMENTAL	3.9	8.3	88	7.8	462	17.3	<.04	<.10	.18	<.008
10...	1345	BLANK	--	--	--	--	--	--	<.04	<.10	<.05	<.008
11...	1000	ENVIRONMENTAL	4.6	7.8	82	7.7	450	16.6	<.04	E.09	.18	<.008
11...	1305	ENVIRONMENTAL	4.6	8.2	87	7.7	437	16.9	<.04	E.07	.18	<.008
NOV												
20...	1500	ENVIRONMENTAL	4.0	10.3	96	8.0	456	11.7	<.04	E.05	.20	<.008
20...	1501	REPLICATE	--	--	--	--	--	--	<.04	<.10	.19	<.008

DATE	ORTHO-PHOS-PHATE, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	ENTERO-COCCI, MEI MF, WATER (col./100 mL) (90909)	COLI-FORM, FECAL, 0.7 µm-MF WATER (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)
OCT						
02...	E.01	E.003	110	78	K90	62
02...	<.02	.006	--	--	--	--
10...	<.02	.005	88	374	92	254
10...	<.02	.004	K31	212	K66	128
10...	<.02	<.004	--	--	--	--
11...	<.02	.004	220	580	270	350
11...	<.02	.004	80	460	124	350
NOV						
20...	<.02	E.002	K2	--	K33	K35
20...	<.02	.006	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07066000 JACKS FORK AT EMINENCE, MO

LOCATION.--Lat 37°09'18", long 91°21'31", in SW ¼ NW ¼ sec.26, T.29 N., R.4 W., Shannon County, Hydrologic Unit 11010008, on right downstream bridge abutment on State Highway 19, 1.5 mi downstream from Mahans Creek, and 8.0 mi upstream from mouth.

DRAINAGE AREA.--398 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. Monthly discharge only for October 1921, published in WSP 1311.

REVISED RECORDS.--WSP 787: 1928(M), 1934. WSP 877: 1938. WSP 927: Drainage area. WSP 1281: 1929. WDR MO-85-1: 1935(M), 1943(M), 1949(M), 1950(M), 1956(M), 1966(M), 1969(M), 1974(M), 1983(M).

GAGE.--Water-stage recorder. Datum of gage is 615.87 ft above National Geodetic Vertical Datum of 1929. Prior to Oct. 1, 1995, datum of gage 2 ft higher. Prior to Jan. 27, 1934, nonrecording gage at site 1,350 ft upstream at datum 2.11 ft higher; Jan. 27, 1934, to Jan. 10, 1935, nonrecording gage at site 75 ft downstream at datum 0.04 ft lower; Jan. 11, 1935, to July 9, 1964, nonrecording gage at site 50 ft downstream at present datum.

REMARKS.--Water-discharge records good. National Weather Service gage-height and U.S.G.S. satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Floods of 1895 and March 1904 reached a stage of about 27 ft, present site and datum, from information by local residents.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	104	116	174	165	3190	254	626	726	554	286	248	192
2	104	116	178	158	1450	275	588	687	527	283	250	187
3	103	116	160	153	885	399	547	627	503	279	242	185
4	102	116	147	149	654	508	504	583	482	280	234	182
5	107	116	138	148	546	452	474	547	497	277	225	181
6	109	115	139	148	487	413	453	532	477	273	219	179
7	109	113	138	144	440	385	458	880	455	270	214	180
8	109	113	136	142	396	362	3080	17700	435	264	208	179
9	107	112	132	139	363	3210	3230	7190	428	265	204	176
10	109	112	128	137	338	2940	1760	4040	434	267	202	173
11	117	112	123	133	309	1500	1290	2550	473	276	207	172
12	119	112	128	132	288	1340	1080	2050	519	275	204	172
13	127	112	148	131	270	1210	995	3510	478	281	253	169
14	126	112	168	130	256	964	2440	2790	458	282	350	170
15	124	112	204	127	246	807	2180	1950	440	274	312	173
16	123	112	436	126	236	905	1430	1550	415	268	276	170
17	122	111	3230	124	227	956	1160	8920	396	268	250	180
18	119	111	2140	124	219	785	1060	6520	376	271	235	177
19	117	112	1060	129	248	1560	920	3100	361	1000	227	176
20	116	112	672	126	412	5450	824	2130	350	3360	224	192
21	116	112	499	124	551	2990	992	1620	338	791	216	199
22	115	112	415	123	474	1810	931	1330	331	533	206	214
23	116	112	359	128	408	1350	780	1140	325	428	205	192
24	117	125	311	192	366	1120	973	1020	318	377	230	181
25	116	123	272	507	338	1090	1230	919	313	353	226	175
26	116	122	244	384	314	1190	944	830	316	323	243	173
27	117	123	223	304	287	1090	856	759	307	301	238	171
28	116	129	206	258	267	967	896	709	307	282	220	169
29	116	149	194	228	---	877	858	660	298	268	209	166
30	116	173	181	212	---	773	769	621	290	255	203	163
31	116	---	173	460	---	685	---	584	---	248	196	---
MEAN	114	118	415	184	517	1246	1144	2541	407	434	232	179
MAX	127	173	3230	507	3190	5450	3230	17700	554	3360	350	214
MIN	102	111	123	123	219	254	453	532	290	248	196	163
IN.	0.33	0.33	1.20	0.53	1.35	3.61	3.21	7.36	1.14	1.26	0.67	0.50

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	MEAN	226	411	449	469	563	720	843	750	461	260	207	208
MAX	1092	2057	2462	2065	1906	1944	2920	2541	2745	1682	984	1439	
(WY)	1985	1994	1983	1949	1985	1945	1927	2002	1928	1951	1927	1993	
MIN	76.5	98.1	96.9	89.8	120	139	200	129	109	84.8	82.6	73.1	
(WY)	1957	1955	1956	1956	1934	1956	2000	1936	1936	1934	1954	1956	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1922 - 2002
ANNUAL MEAN	250	630	462
HIGHEST ANNUAL MEAN			1072
LOWEST ANNUAL MEAN			154
HIGHEST DAILY MEAN	5270	17700	31800
LOWEST DAILY MEAN	102	102	67
ANNUAL SEVEN-DAY MINIMUM	104	105	70
MAXIMUM PEAK FLOW	---	35900	58500
MAXIMUM PEAK STAGE	---	17.22	17.82
INSTANTANEOUS LOW FLOW	---	102	64
ANNUAL RUNOFF (INCHES)	8.51	21.50	15.78
10 PERCENT EXCEEDS	396	1250	893
50 PERCENT EXCEEDS	162	268	245
90 PERCENT EXCEEDS	110	116	124

## WHITE RIVER BASIN

07066000 JACKS FORK AT EMINENCE, MO--Continued  
(Jacks Fork water-quality monitoring network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--May 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT												
02...	1300	ENVIRONMENTAL	104	10.2	105	8.2	340	15.8	<.04	<.10	.28	<.008
10...	1115	ENVIRONMENTAL	109	7.5	78	8.1	343	16.1	<.04	<.10	.32	<.008
10...	1630	ENVIRONMENTAL	109	9.9	104	8.2	337	16.8	<.04	<.10	.26	<.008
11...	1115	ENVIRONMENTAL	116	7.9	82	7.9	337	15.7	<.04	E.05	.30	<.008
11...	1530	ENVIRONMENTAL	116	9.7	102	7.9	337	16.1	<.04	E.09	.28	<.008
NOV												
20...	1415	ENVIRONMENTAL	112	12.4	115	8.2	327	11.3	<.04	<.10	.25	<.008
APR												
02...	1315	ENVIRONMENTAL	590	11.1	112	8.1	234	14.4	<.04	E.08	.36	<.008
30...	1340	ENVIRONMENTAL	760	10.6	110	8.0	246	16.0	<.04	E.06	.20	<.008
30...	1350	REPLICATE	--	--	--	--	--	--	<.04	E.08	.19	<.008
MAY												
29...	1200	ENVIRONMENTAL	657	10.3	110	8.0	240	16.9	<.04	E.07	.30	<.008
JUN												
04...	1200	ENVIRONMENTAL	488	11.9	134	8.0	256	19.6	<.04	<.10	.29	<.008
28...	1045	ENVIRONMENTAL	309	9.1	102	7.6	276	19.6	<.04	E.09	.40	<.008
28...	1400	ENVIRONMENTAL	309	10.3	120	7.7	282	21.6	--	--	--	--
29...	1120	ENVIRONMENTAL	297	8.8	98	7.3	291	19.8	--	--	--	--
29...	1500	ENVIRONMENTAL	297	10.0	118	7.9	288	22.5	<.04	E.09	.22	<.008
JUL												
29...	1420	ENVIRONMENTAL	266	10.5	125	8.2	300	22.8	<.04	<.10	.37	<.008
AUG												
06...	1205	ENVIRONMENTAL	220	9.5	109	7.9	305	21.1	<.04	<.10	.33	E.004
06...	1630	ENVIRONMENTAL	216	11.6	138	8.2	299	22.7	--	--	--	--
07...	0945	ENVIRONMENTAL	216	8.2	91	7.8	305	19.7	--	--	--	--
07...	1445	ENVIRONMENTAL	216	10.8	128	8.1	307	22.7	<.04	E.07	.31	E.005

DATE	ORTHO- PHOS- PHATE, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	ENTERO- COCCI, MEI MF, WATER (col./ 100 mL) (90909)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)
OCT						
02...	<.02	E.003	K1	K12	K12	K3
10...	E.01	E.002	K31	69	K36	46
10...	<.02	.007	K15	46	K24	K37
11...	<.02	E.003	K83	300	108	232
11...	<.02	.004	K17	136	80	128
NOV						
20...	<.02	E.002	<1	--	K3	K4
APR						
02...	<.02	.005	<1	--	K6	K5
30...	<.02	.006	K18	77	37	49
30...	<.02	.006	--	--	--	--
MAY						
29...	<.02	.009	K6	--	26	39
JUN						
04...	<.04	.005	<1	42	K15	23
28...	<.02	.006	K12	29	K13	K18
28...	--	--	K4	K10	K5	K11
29...	--	--	K16	26	27	30
29...	<.02	.010	K4	K9	K16	K15
JUL						
29...	<.02	.006	K3	26	23	25
AUG						
06...	<.02	.004	K20	50	56	K40
06...	--	--	K20	K33	72	K25
07...	--	--	K13	68	42	68
07...	<.02	.004	130	44	K183	K36

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

370905091204001 JACKS FORK ABOVE 2ND UNNAMED HOLLOW (SOUTH) BELOW EMINENCE, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°09'05", long 91°20'40", in SW ¼ NW ¼ SW ¼ sec.25, T.29 N., R.4 W., Shannon County, Hydrologic Unit 11010008, at Jacks Fork Campground and 0.9 mi downstream of Eminence.

DRAINAGE AREA.--406 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT												
02...	1210	ENVIRONMENTAL	104	10.2	107	8.2	342	16.7	<.04	E.05	.36	<.008
10...	1055	ENVIRONMENTAL	109	8.2	86	8.0	342	16.4	<.04	E.10	.30	<.008
10...	1800	ENVIRONMENTAL	109	9.2	98	8.0	--	16.7	<.04	.11	.29	<.008
11...	1320	ENVIRONMENTAL	116	9.5	99	8.1	343	16.1	<.04	<.10	.48	<.008
11...	1715	ENVIRONMENTAL	116	9.6	101	8.2	340	16.5	<.04	E.06	.31	<.008
NOV												
20...	1230	ENVIRONMENTAL	112	11.8	108	8.3	322	11.1	<.04	<.10	.27	<.008
APR												
02...	1405	ENVIRONMENTAL	590	11.1	112	8.1	236	14.3	<.04	E.06	.37	<.008
30...	1410	ENVIRONMENTAL	760	10.4	108	8.2	247	16.0	<.04	.14	.20	<.008
MAY												
29...	1245	ENVIRONMENTAL	657	9.0	97	8.0	243	17.2	<.04	E.06	.30	<.008
JUN												
04...	1255	ENVIRONMENTAL	488	11.6	132	8.0	259	20.2	<.04	.13	.29	<.008
28...	0845	ENVIRONMENTAL	309	8.4	94	7.6	296	19.4	<.04	E.09	.42	<.008
28...	1520	ENVIRONMENTAL	309	10.4	124	7.9	295	22.7	--	--	--	--
29...	1135	ENVIRONMENTAL	297	8.8	100	7.9	296	20.6	--	--	--	--
29...	1630	ENVIRONMENTAL	297	10.0	121	8.2	297	23.3	<.04	E.07	.38	<.008
JUL												
29...	1530	ENVIRONMENTAL	266	10.4	125	8.2	302	23.4	<.04	E.05	.37	<.008
AUG												
06...	0900	ENVIRONMENTAL	220	7.6	86	8.0	310	20.5	<.04	<.10	.35	E.005
06...	1400	ENVIRONMENTAL	216	10.3	120	7.7	307	21.8	--	--	--	--
07...	0830	ENVIRONMENTAL	216	7.3	82	7.5	313	19.8	--	--	--	--
07...	1245	ENVIRONMENTAL	216	9.7	112	7.8	313	21.3	<.04	E.09	.33	E.005

DATE	ORTHO-PHOS-PHATE, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	ENTERO-COCCI, MEI MF, WATER (col./100 mL) (90909)	COLI-FORM, FECAL, µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP, MF, WATER (col./100 mL) (31673)
OCT						
02...	E.01	.008	K8	K21	25	K4
10...	<.02	.007	K34	168	104	100
10...	<.02	.009	K48	377	K60	140
11...	.02	.018	K74	351	108	164
11...	<.02	.010	88	377	88	196
NOV						
20...	<.02	E.002	<1	--	K5	K7
APR						
02...	<.02	.006	K4	--	K14	K11
30...	<.02	.006	25	55	44	64
MAY						
29...	<.02	.008	K9	--	24	28
JUN						
04...	<.04	.006	<1	43	K14	41
28...	<.02	.008	54	69	56	50
28...	--	--	K10	K14	K9	K10
29...	--	--	K10	20	26	20
29...	<.02	.009	K4	K12	K8	20
JUL						
29...	<.02	.008	<1	30	23	20
AUG						
06...	<.02	.004	160	270	K187	300
06...	--	--	K24	110	88	58
07...	--	--	96	287	112	112
07...	<.02	.007	K13	148	K63	K57

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

371014091201301 JACKS FORK ABOVE LICK LOG HOLLOW BELOW EMINENCE, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°10'14", long 91°20'13", in SE ¼ SE ¼ NW ¼ sec.24, T.29 N., R.4 W., Shannon County, Hydrologic Unit  
11010008, 2.4 mi downstream from Eminence.

DRAINAGE AREA.--409 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00300)	pH WATER FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT											
02...	1130	ENVIRONMENTAL	106	10.1	105	8.2	343	16.5	<.04	E.06	.27 <.008
10...	1015	ENVIRONMENTAL	109	8.2	86	8.1	346	16.6	<.04	<.10	.27 <.008
10...	1600	ENVIRONMENTAL	109	8.9	94	8.2	344	17.0	<.04	E.07	.31 <.008
11...	1000	ENVIRONMENTAL	116	8.5	89	7.9	338	16.2	<.04	.14	.34 <.008
11...	1500	ENVIRONMENTAL	116	9.4	99	7.9	338	16.4	<.04	E.07	.32 <.008
NOV											
21...	0930	BLANK	--	--	--	--	--	--	<.04	<.10	<.05 <.008
21...	0945	ENVIRONMENTAL	114	10.1	90	8.4	351	9.6	<.04	<.10	.25 <.008
APR											
02...	1430	BLANK	--	--	--	--	--	--	<.04	<.10	<.05 <.008
02...	1450	ENVIRONMENTAL	590	11.3	114	8.2	233	14.3	<.04	E.07	.37 <.008
30...	1445	ENVIRONMENTAL	760	11.0	115	8.2	248	16.1	<.04	E.09	.20 <.008
MAY											
29...	1315	ENVIRONMENTAL	657	10.5	113	8.0	244	17.3	<.04	E.08	.31 <.008
JUN											
04...	1350	ENVIRONMENTAL	488	11.6	133	8.0	260	21.0	<.04	.11	.28 <.008
28...	1015	ENVIRONMENTAL	309	8.8	99	8.2	296	20.2	<.04	E.09	.41 <.008
28...	1550	ENVIRONMENTAL	309	10.3	124	7.9	297	23.1	--	--	--
29...	1105	ENVIRONMENTAL	297	8.8	100	7.7	297	20.6	--	--	--
29...	1545	ENVIRONMENTAL	297	10.1	122	8.2	297	23.4	<.04	E.08	.38 <.008
29...	1546	REPLICATE	--	--	--	--	--	--	<.04	.10	.38 <.008
JUL											
29...	1610	ENVIRONMENTAL	266	10.6	--	8.2	302	--	<.04	E.06	.35 <.008
AUG											
06...	0945	ENVIRONMENTAL	220	8.1	93	8.0	312	21.2	<.04	E.06	.36 E.005
06...	1430	ENVIRONMENTAL	216	10.2	121	8.3	309	22.7	--	--	--
07...	0900	ENVIRONMENTAL	216	7.7	87	7.9	315	20.1	--	--	--
07...	1315	ENVIRONMENTAL	216	9.6	113	8.1	314	22.4	<.04	E.06	.33 E.006

DATE	ORTHO- PHOS- PHATE, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	ENTERO- COCCI, MEI MF, WATER (col./ 100 mL) (90909)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)
OCT						
02...	E.02	.004	K17	21	30	K15
10...	<.02	.004	92	340	100	148
10...	<.02	.009	240	K1480	440	309
11...	E.01	.015	120	620	245	384
11...	<.02	.009	140	960	210	325
NOV						
21...	<.02	K.002	--	--	--	--
21...	<.02	K.004	<1	--	K14	20
APR						
02...	<.02	<.004	--	--	--	--
02...	<.02	.005	<1	--	K12	22
30...	<.02	.006	23	63	30	29
MAY						
29...	<.02	.007	K8	--	K19	28
JUN						
04...	<.04	.005	K4	97	K89	47
28...	<.02	.008	K18	41	34	33
28...	--	--	K2	K15	K11	K11
29...	--	--	100	68	120	54
29...	<.02	.009	K10	20	K14	26
29...	<.02	.009	--	--	--	--
JUL						
29...	<.02	.007	K2	26	27	27
AUG						
06...	<.02	.009	430	K1340	K780	K1280
06...	--	--	130	390	K650	173
07...	--	--	K100	188	K266	128
07...	<.02	.007	K12	176	560	K63

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.



## WHITE RIVER BASIN

483

07066110 JACKS FORK ABOVE TWO RIVERS, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°10'22", long 91°18'00", in SW ¼ NE ¼ NW ¼ sec.20, T.29 N., R.3 W., Shannon County, Hydrologic Unit 11010008, at the Shawnee Campground, 4.5 mi downstream from the Eminence Wastewater Treatment Plant.

DRAINAGE AREA.--425 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1973 to current year.

REMARKS.--Ozark National Scenic Riverways station since April 1973 and an Ambient Water-Quality Monitoring Network station since November 1993.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 14...	1350	ENVIRONMENTAL		97	13.2	128	7.8	349	13.2	200	39.0	23.9	.27	
JAN 22...	1100	ENVIRONMENTAL		144	12.5	104	8.0	314	6.7	--	--	--	--	
MAR 05...	1030	ENVIRONMENTAL		504	12.7	103	7.8	284	5.8	--	--	--	--	
MAY 13...	1415	ENVIRONMENTAL		2400	8.8	89	7.7	198	15.6	100	21.4	12.0	.29	
JUL 15...	1045	ENVIRONMENTAL		304	7.9	90	7.9	318	20.6	--	--	--	--	
SEP 05...	0830	ENVIRONMENTAL		288	7.1	81	7.7	339	21.0	--	--	--	--	
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 14...	1.79	167	169	206	0	13.0	<.1	2.9	<10	198	<.04	<.10	.20	
JAN 22...	--	162	163	198	0	--	--	--	<10	--	<.04	E.06	.45	
MAR 05...	--	137	139	170	0	--	--	--	<10	--	<.04	E.05	.35	
MAY 13...	2.36	101	100	122	0	2.88	<.1	3.5	36	110	<.04	.29	.21	
JUL 15...	--	169	170	207	0	--	--	--	<40	--	<.04	E.05	.32	
SEP 05...	--	172	173	211	0	--	--	--	<10	--	<.04	E.06	.42	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 14...	<.008	<.06	<.02	<.06	K2	K1	K4	7	14	.3	<.04	<.1	<6	
JAN 22...	<.008	<.06	<.02	<.06	K5	K4	K2	--	--	--	--	--	--	
MAR 05...	<.008	<.06	<.02	<.06	<1	K5	K2	--	--	--	--	--	--	
MAY 13...	<.008	<.06	<.02	.06	460	620	1700	88	330	.2	<.04	<.1	<6	
JUL 15...	<.008	<.06	<.02	<.06	K21	45	40	--	--	--	--	--	--	
SEP 05...	<.008	<.06	<.02	<.06	K28	58	88	--	--	--	--	--	--	

## WHITE RIVER BASIN

07066110 JACKS FORK ABOVE TWO RIVERS, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
14...	<10	<.08	<1	E1.5	<.01	E.2	7	3
JAN								
22...	--	--	--	--	--	--	--	--
MAR								
05...	--	--	--	--	--	--	--	--
MAY								
13...	51	1.07	5	9.4	E.01	E.2	--	5
JUL								
15...	--	--	--	--	--	--	--	--
SEP								
05...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

371026091183301 JACKS FORK ABOVE POWELL SPRING ABOVE TWO RIVERS, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°10'26", long 91°18'33", in SW ¼ NE ¼ NE ¼ sec.19, T.29 N., R.3 W., Shannon County, Hydrologic Unit  
11010008, 3.1 mi upstream from Two Rivers.

DRAINAGE AREA.--412 mi<sup>2</sup>

PERIOD OF RECORD.--May 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT												
02...	1045	ENVIRONMENTAL	108	8.9	92	8.2	347	16.2	<.04	<.10	.23	<.008
10...	0930	ENVIRONMENTAL	109	8.2	86	8.1	347	16.6	<.04	E.06	.24	<.008
10...	1500	ENVIRONMENTAL	109	10.4	110	8.2	347	17.1	<.04	<.10	.24	<.008
11...	0930	ENVIRONMENTAL	116	8.1	85	7.7	340	16.4	<.04	E.05	.27	<.008
11...	1400	ENVIRONMENTAL	116	9.2	97	7.9	339	16.6	<.04	E.05	.29	<.008
NOV												
21...	0845	ENVIRONMENTAL	119	9.6	85	8.2	350	9.1	<.04	<.10	.21	<.008
APR												
02...	1525	ENVIRONMENTAL	590	11.0	111	8.2	240	14.3	<.04	E.07	.38	<.008
30...	1520	ENVIRONMENTAL	751	10.9	114	8.2	251	16.1	<.04	E.08	.19	<.008
MAY												
29...	1345	ENVIRONMENTAL	657	10.6	114	8.1	246	17.3	--	E.10	--	--
JUN												
04...	1430	ENVIRONMENTAL	492	11.4	132	7.9	263	21.4	<.04	E.06	.27	<.008
04...	1431	REPLICATE	--	--	--	--	--	--	<.04	E.09	.28	<.008
28...	1100	ENVIRONMENTAL	314	9.6	110	8.0	299	20.6	<.04	E.09	.40	.009
28...	1615	ENVIRONMENTAL	314	10.4	126	8.2	299	23.7	--	--	--	--
29...	0930	ENVIRONMENTAL	312	8.7	99	7.8	300	20.6	--	--	--	--
29...	1515	ENVIRONMENTAL	312	10.6	127	8.0	299	23.2	<.04	E.08	.37	<.008
JUL												
29...	1630	ENVIRONMENTAL	249	10.9	--	8.2	305	--	<.04	E.05	.34	E.004
AUG												
06...	1030	ENVIRONMENTAL	216	8.2	96	8.0	315	22.1	<.04	<.10	.33	E.005
06...	1500	ENVIRONMENTAL	216	10.5	126	8.2	312	23.2	--	--	--	--
07...	0930	ENVIRONMENTAL	216	7.9	91	8.1	318	21.0	--	--	--	--
07...	1400	ENVIRONMENTAL	216	10.1	121	8.2	315	23.1	<.04	E.09	.31	E.006
			ORTHO- PHOS- PHATE, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	ENTERO- COCCI, MEI MF, WATER (col./ 100 mL) (90909)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)				
OCT												
02...			<.02	.004	K17	41	39	K16				
10...			<.02	.005	64	149	54	K30				
10...			<.02	.005	58	155	100	58				
11...			<.02	.006	270	K1050	420	346				
11...			<.02	.006	84	500	172	208				
NOV												
21...			<.02	E.003	<1	--	K15	26				
APR												
02...			<.02	.007	<1	--	K8	K12				
30...			<.02	.006	K2	38	29	28				
MAY												
29...			--	.008	K5	--	22	26				
JUN												
04...			<.04	.006	K2	70	K87	37				
04...			<.04	.006	--	--	--	--				
28...			<.02	.005	K12	K18	33	K15				
28...			--	--	K8	K19	K19	K11				
29...			--	--	29	41	44	38				
29...			<.02	.007	K3	K12	K17	K12				
JUL												
29...			<.02	.007	K1	28	K16	K14				
AUG												
06...			<.02	.005	86	60	260	84				
06...			--	--	K15	133	420	78				
07...			--	--	K40	K47	168	84				
07...			<.02	.005	K8	K27	200	K23				

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

371019091180101 SHAWNEE CREEK ABOVE TWO RIVERS, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°10'19", long 91°18'01", in SW ¼ NE ¼ NW ¼ sec.20, T.29 N., R.3 W., Shannon County, Hydrologic Unit 11010008, at Shawnee Creek Campground and 2.4 mi upstream from Two Rivers.

DRAINAGE AREA.--20.0 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (per cent saturation) (00300)	pH WATER FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	NITRO-GEN, AM-MONIA + DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, DIS-SOLVED (mg/L as N) (00631)	NITRO-GEN, DIS-SOLVED (mg/L as N) (00613)
OCT											
03...	1100	ENVIRONMENTAL	2.8	9.3	96	8.0	515	16.0	<.04	E.06	.14 <.008
10...	0945	ENVIRONMENTAL	2.8	7.8	81	7.9	511	16.1	<.04	<.10	.11 <.008
10...	1515	ENVIRONMENTAL	2.8	7.3	77	8.0	511	16.6	<.04	<.10	.10 <.008
11...	1215	ENVIRONMENTAL	4.6	8.5	89	8.0	516	16.7	<.04	<.10	.11 <.008
11...	1645	ENVIRONMENTAL	4.6	8.6	91	8.0	512	17.0	<.04	<.10	.11 <.008
NOV											
20...	1115	ENVIRONMENTAL	3.0	11.8	106	8.2	514	10.1	<.04	<.10	.07 <.008
APR											
03...	1155	ENVIRONMENTAL	20	10.9	102	8.2	363	11.9	<.04	E.07	.27 <.008
MAY											
01...	1215	ENVIRONMENTAL	28	10.4	109	8.3	379	15.9	<.04	.15	.12 <.008
30...	0845	ENVIRONMENTAL	36	9.1	97	8.1	386	17.2	<.04	E.09	.14 <.008
30...	0846	REPLICATE	--	--	--	--	--	--	<.04	.10	.14 <.008
JUN											
05...	1055	ENVIRONMENTAL	32	8.1	91	7.9	388	20.0	<.04	.16	.25 <.008
28...	1150	ENVIRONMENTAL	12	8.2	99	8.0	471	23.0	<.04	E.09	.24 <.008
28...	1550	ENVIRONMENTAL	12	8.5	106	8.1	471	25.0	--	--	--
29...	1125	ENVIRONMENTAL	12	8.2	98	8.0	477	23.2	--	--	--
29...	1500	ENVIRONMENTAL	12	8.2	101	8.1	472	25.0	<.04	E.10	.37 <.008
JUL											
30...	1120	ENVIRONMENTAL	11	6.3	79	8.1	486	25.9	<.04	E.06	.20 E.004
AUG											
06...	1145	ENVIRONMENTAL	6.5	7.3	90	7.8	499	24.7	<.04	<.10	.20 E.004
06...	1545	ENVIRONMENTAL	6.5	6.9	86	8.0	492	25.4	--	--	--
07...	1005	ENVIRONMENTAL	6.5	6.7	79	8.1	501	22.9	--	--	--
07...	1330	ENVIRONMENTAL	6.5	7.3	90	8.1	500	24.7	<.04	.11	.19 E.005

DATE	ORTHO-PHOS-PHATE, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	ENTERO-COCCI, MEI MF, WATER (col./100 mL) (90909)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)
OCT						
03...	<.02	.008	K4	K33	K12	K8
10...	<.02	.008	K9	188	K48	116
10...	<.02	.007	K34	231	88	K100
11...	<.02	.008	120	530	144	257
11...	<.02	.007	110	560	124	271
NOV						
20...	<.02	E.003	<2	--	<2	K8
APR						
03...	<.02	.004	K2	--	K10	K10
MAY						
01...	<.02	.017	50	96	70	48
30...	<.02	.005	K14	--	K30	86
30...	<.02	.006	--	--	--	--
JUN						
05...	<.04	.014	K3200	K4980	K3200	K3240
28...	<.02	.005	K22	170	K25	138
28...	--	--	K28	230	K18	154
29...	--	--	K15	190	K20	130
29...	.07	.007	K22	150	K23	114
JUL						
30...	<.02	.009	K9	280	K20	300
AUG						
06...	<.02	.012	510	453	K933	533
06...	--	--	K60	K75	198	K58
07...	--	--	330	330	300	270
07...	<.02	.013	200	300	240	K167

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

371020091174101 JACKS FORK ABOVE LITTLE SHAWNEE CREEK ABOVE TWO RIVERS, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°10'20", long 91°17'41", in SW ¼ NW ¼ NE ¼ sec.20, T.29 N., R.3 W., Shannon County, Hydrologic Unit 11010008, just below Shawnee Creek Campground and 2.2 mi upstream from Two Rivers.

DRAINAGE AREA.--433 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER WHOLE FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AMMONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT												
03...	1000	ENVIRONMENTAL	107	8.9	92	8.1	351	16.0	<.04	<.10	.24	<.008
03...	1030	BLANK	--	--	--	--	--	--	<.04	<.10	<.05	<.008
10...	1000	ENVIRONMENTAL	111	7.9	83	8.0	343	16.5	<.04	E.08	.24	<.008
10...	1530	ENVIRONMENTAL	111	8.8	94	8.1	343	17.0	<.04	E.06	.23	<.008
10...	1535	REPLICATE	--	--	--	--	--	--	<.04	<.10	.23	<.008
11...	1200	ENVIRONMENTAL	111	8.5	89	8.1	350	16.6	<.04	<.10	.26	<.008
11...	1630	ENVIRONMENTAL	111	9.3	98	8.2	348	16.8	<.04	<.10	.29	<.008
NOV												
20...	1045	ENVIRONMENTAL	111	11.2	100	8.2	349	10.0	<.04	<.10	.22	<.008
APR												
03...	1145	ENVIRONMENTAL	551	10.7	99	8.2	244	11.7	<.04	<.10	.39	<.008
MAY												
01...	1145	ENVIRONMENTAL	728	10.2	106	8.1	267	15.4	<.04	E.08	.22	<.008
30...	0930	ENVIRONMENTAL	690	9.3	98	7.9	251	16.8	<.04	.11	.30	<.008
JUN												
05...	1130	ENVIRONMENTAL	548	8.6	94	7.9	264	18.7	<.04	E.08	.36	<.008
28...	1140	ENVIRONMENTAL	314	9.5	110	8.0	309	21.2	<.04	E.09	.39	<.008
28...	1545	ENVIRONMENTAL	314	10.4	126	8.1	308	23.6	--	--	--	--
29...	1115	ENVIRONMENTAL	302	9.3	107	7.9	312	21.3	--	--	--	--
29...	1445	ENVIRONMENTAL	302	10.3	122	8.1	312	23.0	<.04	E.08	.35	<.008
JUL												
30...	1105	ENVIRONMENTAL	250	8.7	102	8.1	308	22.3	<.04	E.06	.35	E.004
AUG												
06...	1130	ENVIRONMENTAL	212	8.8	104	8.1	316	22.7	<.04	E.05	.31	E.005
06...	1530	ENVIRONMENTAL	212	10.2	123	7.9	310	23.6	--	--	--	--
07...	1000	ENVIRONMENTAL	212	8.2	94	7.9	313	21.4	--	--	--	--
07...	1315	ENVIRONMENTAL	212	9.3	110	8.2	318	22.8	<.04	E.09	.32	E.005

DATE	ORTHO-PHOS-PHATE, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	ENTERO-COCCI, MEI MF, WATER (col./100 mL) (90909)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)
OCT						
03...	<.02	.004	20	34	25	K17
03...	<.02	<.004	--	--	--	--
10...	<.02	.005	K44	89	56	80
10...	<.02	.005	K9	104	60	40
10...	<.02	.004	--	--	--	--
11...	<.02	.004	160	K592	220	284
11...	<.02	.013	91	K412	152	188
NOV						
20...	<.02	E.002	K1	--	K5	K10
APR						
03...	<.02	.005	<1	--	K5	K3
MAY						
01...	<.02	.006	36	97	35	88
30...	<.02	.007	K13	--	20	67
JUN						
05...	<.04	.008	380	770	K840	510
28...	<.02	.005	K19	K18	20	K16
28...	--	--	K5	K14	K9	K10
29...	--	--	K20	K26	25	K14
29...	<.02	.005	K3	K26	22	20
JUL						
30...	<.02	.007	K5	105	K63	103
AUG						
06...	<.02	.006	K180	70	84	64
06...	--	--	710	910	K920	K1040
07...	--	--	110	100	132	K57
07...	<.02	.005	K17	K26	96	K29

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

371054091173501 JACKS FORK BELOW 3RD UNNAMED HOLLOW (NORTH) ABOVE TWO RIVERS, MO  
(Jacks Fork water-quality monitoring network)

LOCATION.--Lat 37°10'54", long 91°17'35", in NE ¼ NW ¼ SE ¼ sec.17, T.29 N., R.3 W., Shannon County, Hydrologic Unit  
11010008, 1.4 mi upstream from Two Rivers.

DRAINAGE AREA.--444 mi<sup>2</sup>.

PERIOD OF RECORD.--May 1998 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS- CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS- SOLVED (mg/L) (00300)	OXYGEN, DIS- SOLVED (per- cent satur- ation) (00301)	pH WATER FIELD (stand- ard units) (00400)	SPE- CIFIC CON- DUCT- ANCE (µS/cm) (00095)	TEMPER- ATURE WATER (deg C) (00010)	NITRO- GEN, AM- MONIA DIS- SOLVED (mg/L as N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)
OCT												
03...	0900	ENVIRONMENTAL	110	7.7	79	8.2	359	15.6	<.04	<.10	.23	<.008
10...	0845	ENVIRONMENTAL	129	7.7	80	7.8	350	16.2	<.04	E.07	.24	<.008
10...	1430	ENVIRONMENTAL	129	8.6	92	8.0	352	16.9	<.04	.27	.22	<.008
11...	1045	ENVIRONMENTAL	129	8.0	84	8.1	357	16.6	<.04	E.06	.27	<.008
11...	1500	ENVIRONMENTAL	129	8.2	87	8.1	354	16.9	<.04	<.10	.26	<.008
NOV												
20...	0900	ENVIRONMENTAL	124	10.4	93	8.1	354	10.2	<.04	--	.22	<.008
APR												
03...	1000	ENVIRONMENTAL	551	10.3	94	8.1	250	10.8	<.04	E.07	.39	<.008
MAY												
01...	1030	ENVIRONMENTAL	728	9.7	100	7.9	265	15.3	<.04	E.07	.23	<.008
30...	1100	ENVIRONMENTAL	738	9.6	102	7.9	260	17.3	<.04	E.08	.29	<.008
JUN												
05...	0940	ENVIRONMENTAL	548	8.6	95	7.8	277	19.1	<.04	E.07	.32	<.008
28...	0910	ENVIRONMENTAL	310	7.8	89	7.9	319	20.5	<.04	E.09	.40	<.008
28...	0911	REPLICATE	--	--	--	--	--	--	<.04	E.08	.40	<.008
28...	1500	ENVIRONMENTAL	310	10.6	127	7.9	320	23.1	--	--	--	--
29...	1030	ENVIRONMENTAL	298	8.4	96	7.8	322	21.2	--	--	--	--
29...	1345	ENVIRONMENTAL	298	9.9	117	8.0	323	22.7	<.04	E.08	.37	<.008
JUL												
30...	0945	ENVIRONMENTAL	268	7.4	86	8.1	320	22.0	<.04	<.10	.35	<.008
30...	1000	BLANK	--	--	--	--	--	--	<.04	<.10	<.05	<.008
AUG												
06...	1015	ENVIRONMENTAL	226	7.7	92	8.1	323	23.0	<.04	<.10	.31	E.005
06...	1445	ENVIRONMENTAL	226	10.3	125	8.3	318	23.7	--	--	--	--
07...	0915	ENVIRONMENTAL	226	7.5	86	8.1	322	21.4	--	--	--	--
07...	1215	BLANK	--	--	--	--	--	--	<.04	<.10	<.05	E.004
07...	1230	ENVIRONMENTAL	226	9.1	107	8.1	324	22.5	<.04	E.08	.31	E.005

DATE	ORTHO- PHOS- PHATE, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	ENTERO- COCCI, MEI MF, WATER (col./ 100 mL) (90909)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STREP MF, WATER (col./ 100 mL) (31673)
OCT						
03...	<.02	.004	32	47	42	36
10...	<.02	.004	100	120	111	78
10...	<.02	.004	K21	112	46	K33
11...	<.02	.004	240	K612	K292	244
11...	<.02	.006	100	324	156	123
NOV						
20...	<.02	--	<1	--	21	K17
APR						
03...	<.02	.005	K2	--	K12	K13
MAY						
01...	<.02	.006	39	97	49	71
30...	<.02	.008	K2	--	22	65
JUN						
05...	<.04	.005	K20	53	44	182
28...	<.02	.007	K83	230	47	245
28...	<.02	.006	--	--	--	--
28...	--	--	K13	32	K13	24
29...	--	--	27	46	K17	20
29...	<.02	.006	K9	K18	K18	K11
JUL						
30...	<.02	.006	K18	220	115	325
30...	<.02	<.004	--	--	--	--
AUG						
06...	<.02	.004	96	74	K142	92
06...	--	--	62	50	220	K33
07...	--	--	130	124	K140	50
07...	<.02	<.004	--	--	--	--
07...	<.02	.006	K35	48	K162	K18

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## 07067000 CURRENT RIVER AT VAN BUREN, MO

LOCATION.--Lat 36°59'29", long 91°00'53", in NE ¼ NW ¼ sec.25, T.27 N., R.1 W., Carter County, Hydrologic Unit 11010008, near right bank on downstream side of bridge pier on U.S. Highway 60 in Van Buren, 0.4 mi downstream from Pike Creek, 4.7 mi upstream from Big Creek, and at mile 90.4.

DRAINAGE AREA.--1,667 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1912 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1938. WSP 897: 1939. WSP 927: Drainage area. WSP 1281: 1929.

GAGE.--Water-stage recorder. Datum of gage is 442.78 ft above National Geodetic Vertical Datum of 1929. Prior to Sept. 1, 1926, nonrecording gage at site 100 ft downstream at datum 3.00 ft higher; Sept. 1, 1926, to Oct. 19, 1934, nonrecording gage and Oct. 20, 1934, to Sept. 30, 1939, water-stage recorder, at present site and datum 3.00 ft higher.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of Mar. 26, 1904, reached a stage of 29.0 ft, present datum, from floodmarks.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	534	585	1150	1050	8750	1290	3170	3610	3070	1320	1140	895
2	519	599	1090	1010	7990	1340	2940	3520	2860	1290	1050	873
3	523	599	973	971	5190	1700	2710	3300	2670	1320	1050	e858
4	524	588	882	940	4080	2140	2460	3070	2540	1280	1030	858
5	540	578	821	920	3420	2170	2280	2820	2630	1250	1010	849
6	561	575	823	928	2990	2040	2150	2650	2660	1230	990	837
7	549	573	819	907	2670	1930	2130	3510	2400	1200	991	830
8	536	571	802	881	2390	1850	6840	28100	2240	1180	962	827
9	533	566	765	866	2170	7060	10100	53100	2170	1160	944	821
10	560	563	734	857	1980	10700	6710	17500	2250	1250	935	812
11	608	564	714	843	1810	6590	5260	10200	2180	2010	952	804
12	643	561	733	823	1660	5930	4510	7940	2220	1870	987	801
13	657	559	863	812	1540	5560	4230	19400	2290	1770	1110	794
14	679	559	1130	807	1440	4810	5720	23500	2200	1380	1420	799
15	641	561	1250	794	1350	4320	8610	10100	2060	1300	1300	864
16	631	559	1820	780	1300	4630	6070	7750	1950	1300	1180	840
17	620	558	8460	773	1240	4770	5050	24300	1870	1250	1100	905
18	600	556	9620	777	1180	4250	4600	40200	1780	1210	1040	980
19	593	561	5700	805	1230	5290	4160	16800	1700	1360	1030	888
20	589	560	4160	793	1990	14600	3860	9960	1650	3880	1030	953
21	588	554	3340	775	2520	12600	3950	7910	1600	2600	1070	994
22	580	553	2780	768	2370	7650	4480	6790	1550	1730	1100	939
23	582	558	2410	798	2080	6100	4070	6040	1510	1460	1050	890
24	624	650	2100	1140	1870	5220	4740	5470	1480	1340	1050	846
25	685	687	1850	1620	1720	5060	6000	5000	1460	1270	1030	823
26	652	688	1650	1890	1610	5570	4980	4560	1440	1220	1010	809
27	626	668	1500	1620	1480	4990	4360	4190	1420	1180	1000	810
28	609	700	1380	1430	1360	4500	4160	3990	1490	1140	976	807
29	595	831	1280	1300	---	4160	3950	3720	1400	1120	942	797
30	589	1060	1180	1220	---	3810	3660	3480	1360	e1120	920	786
31	584	---	1110	2350	---	3480	---	3280	---	e1460	904	---
MEAN	592	612	2061	1040	2549	5036	4597	11150	2003	1466	1042	853
MAX	685	1060	9620	2350	8750	14600	10100	53100	3070	3880	1420	994
MIN	519	553	714	768	1180	1290	2130	2650	1360	1120	904	786
IN.	0.41	0.41	1.43	0.72	1.59	3.48	3.08	7.72	1.34	1.01	0.72	0.57

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	MEAN	1091	1710	1909	1995	2266	2842	3417	3124	2118	1326	1093	1029
MAX	4087	7171	10740	7357	6764	7148	11730	11150	9761	6465	3581	3860	
(WY)	1985	1994	1983	1950	1985	1945	1927	2002	1928	1951	1927	1993	
MIN	492	573	535	538	658	778	805	679	628	575	532	495	
(WY)	1957	1955	1956	1956	1934	1941	1956	1936	1936	1936	1954	1956	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	FOR PERIOD OF RECORD
ANNUAL MEAN	1070	2760	1990
HIGHEST ANNUAL MEAN			4811
LOWEST ANNUAL MEAN			799
HIGHEST DAILY MEAN	10400	Feb 26	53100
LOWEST DAILY MEAN	519	Sep 6, Oct 2	519
ANNUAL SEVEN-DAY MINIMUM	529	Sep 28	536
MAXIMUM PEAK FLOW	---	67000	May 9
MAXIMUM PEAK STAGE	---	22.80	May 9
INSTANTANEOUS LOW FLOW	---	506	Oct 2, 3, 5
ANNUAL RUNOFF (INCHES)	8.72	22.48	16.22
10 PERCENT EXCEEDS	1700	5620	3740
50 PERCENT EXCEEDS	734	1290	1250
90 PERCENT EXCEEDS	554	589	693

e Estimated

## WHITE RIVER BASIN

07067500 BIG SPRING NEAR VAN BUREN, MO

LOCATION.--Lat 36°57'05", long 90°59'36", in SW 1/4 NE 1/4 sec.6, T.26 N., R.1 E., Carter County, Hydrologic Unit 11010008, on right bank 400 ft downstream from spring outlet, 0.4 mi upstream from Current River, and 3.5 mi southeast of Van Buren.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to September 1996, Feb. 8, 2000 to current year. Prior to Oct. 1, 1923, published as "near Chicopee". Monthly discharge only for some periods, published in WSP 1311.

REVISED RECORDS.--WSP 1311: 1922-23, 1928(M), 1929.

GAGE.--Water-stage recorder. Gage height record furnished by the National Park Service. Datum of gage is 429.08 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 19, 1971, nonrecording gage; prior to Oct. 1, 1934, at datum 1.0 ft higher. Water-stage recorder Feb. 19, 1971 to March 15, 1978, at present datum; March 1978 to September 1996, nonrecording gage.

REMARKS.--Water-discharge records fair except for estimated daily discharges, which are poor.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	271	269	271	366	e800	393	677	611	710	523	473	436
2	268	e261	271	362	e750	386	645	580	701	521	468	434
3	268	e261	271	356	e680	371	598	558	695	518	466	431
4	e265	270	268	354	624	373	580	547	689	515	464	429
5	e265	e261	265	351	576	381	571	538	686	513	462	432
6	e265	e260	263	346	566	386	575	551	684	510	460	431
7	266	e260	264	337	539	383	577	606	661	507	456	426
8	e265	e261	e258	344	516	394	e750	e800	647	504	455	427
9	e264	e260	e259	341	499	e750	e900	e1100	641	509	455	429
10	269	271	261	334	469	e850	e950	e950	642	510	454	428
11	269	269	260	326	457	e850	809	e900	633	521	451	422
12	271	270	260	336	450	759	708	e850	627	535	453	423
13	270	270	267	335	434	679	676	e1100	624	540	454	421
14	e263	269	275	325	426	602	e750	e1100	616	526	461	415
15	e262	267	276	313	414	568	e950	e1000	606	524	458	410
16	e262	267	374	329	403	639	e900	e960	599	521	454	413
17	e261	267	e800	324	392	683	780	e1000	591	514	455	414
18	267	267	e750	327	390	652	716	e1100	582	514	453	413
19	267	e257	e620	328	388	803	664	e1000	573	522	452	410
20	266	e257	e560	329	415	e1050	631	e920	567	649	445	400
21	267	266	533	318	404	e1050	630	e860	562	555	445	390
22	268	265	495	323	401	e1000	665	e880	556	514	444	386
23	e261	265	468	327	409	996	628	e920	551	499	444	389
24	e262	e256	453	398	407	864	680	e880	548	496	442	387
25	e261	e255	441	390	398	843	e800	e850	545	493	440	385
26	e260	e255	424	392	383	983	737	825	541	489	440	383
27	e260	e255	412	384	384	896	679	786	538	486	436	372
28	268	265	399	377	402	821	642	770	535	481	432	361
29	e261	e259	370	370	---	789	616	752	530	480	435	366
30	e261	e260	365	366	---	736	612	734	526	477	433	365
31	e262	---	370	445	---	707	---	720	---	477	434	---
MEAN	265	263	381	350	478	698	703	831	607	514	451	408
MAX	271	271	800	445	800	1050	950	1100	710	649	473	436
MIN	260	255	258	313	383	371	571	538	526	477	432	361
IN.	3.06	2.94	4.40	4.04	4.98	8.05	7.85	9.58	6.77	5.93	5.20	4.55

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

MEAN	344	388	414	440	463	520	577	563	486	417	378	353
MAX	599	769	1070	828	823	836	902	944	950	772	702	525
(WY)	1950	1986	1983	1937	1949	1945	1973	1957	1927	1928	1927	1927
MIN	243	248	252	247	279	279	279	261	253	249	252	250
(WY)	1957	1957	1956	1956	1977	1936	1936	1936	1936	1936	1936	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1922 - 2002	
ANNUAL MEAN	315		496		446	
HIGHEST ANNUAL MEAN					648	
LOWEST ANNUAL MEAN					289	
HIGHEST DAILY MEAN	800		1100 <sup>a</sup>		2000	
LOWEST DAILY MEAN	255		255		236	
ANNUAL SEVEN-DAY MINIMUM	258		258		238	
ANNUAL RUNOFF (INCHES)	42.73		67.33		60.57	
10 PERCENT EXCEEDS	385		800		690	
50 PERCENT EXCEEDS	296		451		395	
90 PERCENT EXCEEDS	264		265		290	

e Estimated

<sup>a</sup> During period of estimated record.



07067500 BIG SPRING NEAR VAN BUREN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--April 1973 to current year.

REMARKS.--Ozark National Scenic Riverways station from April 1975 to October 1996, Ambient Water-Quality Monitoring Network station since November 1993.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE (µS/cm) (00095)	TEMPERATURE WATER (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
DEC 03...	1420	ENVIRONMENTAL	267	8.7	87	7.3	348	14.8	--	--	--	--		
MAR 05...	1310	ENVIRONMENTAL	381	10.2	100	7.4	293	14.3	160	32.9	18.9	.14		
MAR 05...	1311	BLANK	--	--	--	--	--	--	--	.04	E.005	<.10		
MAY 13...	1620	ENVIRONMENTAL	1100	9.3	92	6.9	177	13.9	--	--	--	--		
AUG 19...	1215	BLANK	--	--	--	--	--	--	--	<.01	<.008	<.10		
AUG 19...	1230	ENVIRONMENTAL	452	10.0	100	7.4	323	14.7	180	36.9	20.6	.80		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
DEC 03...	--	185	186	227	0	--	--	--	--	<10	--	<.04	<.10	.23
MAR 05...	1.29	150	151	184	0	2.87	E.1	2.4	<10	162	<.04	<.10	<.10	.46
MAR 05...	.27	--	--	--	--	--	<.1	E.1	<10	<10	<.04	<.10	<.10	<.05
MAY 13...	--	91	92	112	0	--	--	--	--	<10	--	<.04	E.05	.47
AUG 19...	<.09	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.10	<.05
AUG 19...	1.41	164	165	201	0	1.79	<.1	1.9	<10	182	<.04	<.10	<.10	.42
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
DEC 03...	<.008	<.06	<.02	<.06	K1	K2	K15	--	--	--	--	--	--	--
MAR 05...	<.008	<.06	<.02	<.06	<1	K1	K1	6	19	E.2	<.04	<.1	<.1	<6
MAR 05...	<.008	<.06	<.02	<.06	--	--	--	<1	3	<.2	<.04	<.1	<.1	<6
MAY 13...	<.008	<.06	<.02	<.06	K20	K60	800	--	--	--	--	--	--	--
AUG 19...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	<.1	<.1	<6
AUG 19...	.009	<.06	<.02	<.06	K1	K1	K6	1	18	E.2	<.04	<.1	<.1	<6

## WHITE RIVER BASIN

07067500 BIG SPRING NEAR VAN BUREN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
DEC 03...	--	--	--	--	--	--	--	--
MAR 05...	E7	<.08	<1	<2.0	<.01	<.3	--	2
05...	<10	<.08	<1	<2.0	<.01	<.3	--	6
MAY 13...	--	--	--	--	--	--	--	--
AUG 19...	<10	<.08	<1	<2.0	<.01	<.3	<1	<1
19...	<10	<.08	<1	<2.0	<.01	<.3	<1	1

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

07068000 CURRENT RIVER AT DONIPHAN, MO

LOCATION.--Lat 36°37'19", long 90°50'51", in NW ¼ NW ¼ sec.27, T.23 N., R.2 E., Ripley County, Hydrologic Unit 11010008, on right bank 0.5 mi upstream from U.S. Highway 160, 1.0 mi west of Doniphan, 2.5 mi upstream from Briar Creek, and at mile 51.3.

DRAINAGE AREA.--2,038 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1918 to current year. Prior to July 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 877: 1937-38(M). WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 321.21 ft above National Geodetic Vertical Datum of 1929. Prior to July 3, 1936, nonrecording gages at several sites 0.5 mi downstream at various datums. July 1936 to Sept. 30, 1971, datum was 1.00 ft higher.

REMARKS.--Water-discharge records good. National Weather Service gage-height and U.S. Army Corps of Engineers satellite telemeters at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of March 1904 reached a stage of 25.9 ft, from floodmarks, present site and datum, discharge, 130,000 ft<sup>3</sup>/s, from rating curve extended above 60,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	890	952	1730	1570	8550	1890	4520	4350	4220	2040	1800	1710
2	887	964	1670	1480	11400	1820	4210	4260	3950	2010	1710	1700
3	887	966	1560	1420	7580	1960	3910	4100	3690	1990	1680	1690
4	886	956	1450	1380	5780	2260	3630	3890	3480	2000	1650	1670
5	918	948	1370	1350	4800	2530	3400	3660	3470	1950	1610	1660
6	923	941	1340	1350	4130	2460	3220	3460	3660	1920	1590	1650
7	916	941	1340	1310	3680	2350	3100	3480	3340	1890	1570	1630
8	906	938	1330	1280	3340	2270	5020	15000	3120	1860	1550	1620
9	895	935	1330	1250	3050	4480	10600	46300	3010	1830	1520	1620
10	918	930	1280	1230	2810	11900	9730	54100	3140	1840	1500	1610
11	1020	927	1240	1200	2600	9850	7000	17700	3060	2110	1480	1600
12	988	927	1210	1180	2420	7400	5960	11200	3000	2730	1510	1590
13	1050	927	e1290	1160	2260	7000	5540	16500	3250	2790	1860	1580
14	1060	927	1510	1140	2130	6220	9160	27000	3080	2320	2300	1580
15	1050	927	1800	1120	2010	5490	10000	21900	2950	2780	2290	1610
16	1020	927	e2120	1110	1920	5470	8750	11100	2850	2370	2170	1630
17	997	924	e5410	1100	1840	5770	6880	15800	2750	2190	2050	1620
18	985	922	11800	1090	1790	5450	6080	38400	2630	2110	1970	1720
19	969	931	10700	1110	1830	6460	5500	43900	2520	2290	1930	1710
20	962	926	5960	1090	2300	14500	5120	16400	2450	2700	1900	1760
21	956	922	4650	1080	2990	19500	4950	11300	2370	5090	1900	1740
22	955	919	3940	1070	3110	12200	5250	9520	2320	2850	1920	1720
23	952	920	3340	1850	2850	8550	5200	8350	2260	2290	1960	1680
24	964	1030	2940	4660	2600	7140	4900	7550	2220	2090	1980	1630
25	1010	1040	2630	2530	2420	8000	6410	6920	2210	1970	1900	1590
26	1030	1070	2370	2630	2260	9360	6130	6360	2170	1900	1880	1580
27	1000	1090	2160	2450	2120	7670	5410	5850	2150	1840	1840	1570
28	981	1170	2000	2230	1990	6590	4970	5580	2150	1790	1820	1570
29	964	1340	1860	2010	---	5960	4790	5380	2180	1740	1790	1560
30	960	1660	1740	1970	---	5440	4530	4930	2090	1710	1750	1550
31	954	---	1640	3600	---	4950	---	4580	---	2130	1730	---
MEAN	963	997	2797	1645	3449	6545	5796	14160	2858	2230	1810	1638
MAX	1060	1660	11800	4660	11400	19500	10600	54100	4220	5090	2300	1760
MIN	886	919	1210	1070	1790	1820	3100	3460	2090	1710	1480	1550
IN.	0.54	0.55	1.58	0.93	1.76	3.70	3.17	8.01	1.57	1.26	1.02	0.90

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1921 - 2002, BY WATER YEAR (WY)

MEAN	1637	2378	2687	2854	3127	3873	4607	4219	2970	1981	1680	1577
MAX	4596	8514	16210	9054	7971	9260	16140	14160	12610	7676	5001	4547
(WY)	1985	1994	1983	1949	1985	1935	1927	2002	1928	1951	1927	1993
MIN	872	927	950	917	1122	1218	1476	1183	1075	959	933	903
(WY)	1957	1955	1956	1956	1934	1941	1956	1936	1936	1934	2001	1954

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1921 - 2002	
ANNUAL MEAN	1612		3753		2795	
HIGHEST ANNUAL MEAN					5856	
LOWEST ANNUAL MEAN					1326	
HIGHEST DAILY MEAN	14500	Feb 26	54100	May 10	90000	Mar 12 1935
LOWEST DAILY MEAN	883	Sep 7	886	Oct 4	852	Oct 8 1956
ANNUAL SEVEN-DAY MINIMUM	892	Sep 28	901	Oct 1	852	Oct 8 1956
MAXIMUM PEAK FLOW	---		70400	May 10	122000	Dec 3 1982
MAXIMUM PEAK STAGE	---		20.58	May 10	25.49	Dec 3 1982
INSTANTANEOUS LOW FLOW	---		879	Oct 4	852	Oct 8 1956
ANNUAL RUNOFF (INCHES)	10.74		25.00		18.63	
10 PERCENT EXCEEDS	2370		7460		4980	
50 PERCENT EXCEEDS	1230		2000		1920	
90 PERCENT EXCEEDS	918		961		1170	

e Estimated

## WHITE RIVER BASIN

07068000 CURRENT RIVER AT DONIPHAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--July 1969 to July 1975, October 1979 to September 1980, October 1981 to September 1982, October 1983 to June 1989, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
OCT 24...	1000	ENVIRONMENTAL	960	8.8	96	7.9	342	18.4	--	--	--	--		
NOV 05...	1240	ENVIRONMENTAL	944	10.9	109	7.9	338	15.3	190	38.3	23.4	E.09		
DEC 05...	1335	ENVIRONMENTAL	1360	7.6	73	7.8	340	13.1	--	--	--	--		
JAN 14...	1230	ENVIRONMENTAL	1140	12.4	106	7.7	294	7.9	160	32.9	19.3	.22		
FEB 04...	1350	ENVIRONMENTAL	5670	10.6	91	7.9	243	9.1	--	--	--	--		
MAR 27...	1420	ENVIRONMENTAL	7480	10.6	96	7.9	204	10.6	--	--	--	--		
APR 16...	1545	ENVIRONMENTAL	8250	8.9	97	7.5	209	18.7	--	--	--	--		
MAY 16...	1345	ENVIRONMENTAL	10900	8.2	85	7.7	198	16.5	100	22.0	11.4	.25		
JUN 10...	1245	ENVIRONMENTAL	3190	7.2	81	7.9	253	20.5	--	--	--	--		
JUL 08...	1515	ENVIRONMENTAL	1860	6.4	80	8.1	319	26.1	160	34.0	18.9	.96		
JUL 08...	1516	REPLICATE	--	--	--	--	--	--	170	34.2	19.4	.96		
AUG 19...	1600	ENVIRONMENTAL	1930	7.9	96	7.9	317	24.2	--	--	--	--		
SEP 16...	1150	ENVIRONMENTAL	1630	8.8	101	8.0	344	21.6	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 24...	--	175	179	218	0	--	--	--	<10	--	<.04	E.08	.09	
NOV 05...	2.40	178	180	220	0	2.42	<.1	2.4	<10	184	<.04	<.10	.07	
DEC 05...	--	193	194	237	0	--	--	--	<10	--	E.03	<.10	.15	
JAN 14...	2.11	149	151	184	0	2.82	E.1	4.1	<10	146	<.04	E.06	.41	
FEB 04...	--	123	121	148	0	--	--	--	<10	--	<.04	.13	.42	
MAR 27...	--	94	92	112	0	--	--	--	12	--	<.04	.32	.28	
APR 16...	--	93	94	115	0	--	--	--	12	--	<.04	.23	.27	
MAY 16...	2.20	95	94	115	0	1.98	<.1	4.2	19	108	<.04	.16	.25	
JUN 10...	--	129	129	157	0	--	--	--	<10	--	<.04	.17	.27	
JUL 08...	1.47	158	159	194	0	2.24	<.1	2.5	<10	175	<.04	E.09	.26	
JUL 08...	1.54	--	--	--	--	2.42	<.1	2.6	--	168	<.04	E.09	.26	
AUG 19...	--	159	159	194	0	--	--	--	<10	--	<.04	<.10	.18	
SEP 16...	--	177	177	216	0	--	--	--	<10	--	<.04	E.06	.21	

07068000 CURRENT RIVER AT DONIPHAN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS- SOLVED (µg/L as Cu) (01040)
OCT 24...	<.008	<.06	<.02	<.06	<1	21	55	--	--	--	--	--	--
NOV 05...	<.008	<.06	<.02	<.06	K2	K3	K6	7	9	E.1	<.04	<.1	<6
DEC 05...	<.008	<.06	<.02	<.06	K2	K7	K15	--	--	--	--	--	--
JAN 14...	E.004	<.06	<.02	<.06	<1	K1	K2	14	22	.2	<.04	<.1	<6
FEB 04...	<.008	<.06	<.02	<.06	K8	40	K35	--	--	--	--	--	--
MAR 27...	<.008	<.06	<.02	<.06	K17	K2	K16	--	--	--	--	--	--
APR 16...	<.008	<.06	<.02	<.06	K7	K250	108	--	--	--	--	--	--
MAY 16...	E.006	<.06	<.02	E.03	K38	109	260	85	263	.3	E.02	<.1	<6
JUN 10...	<.008	<.06	<.02	<.06	K30	103	81	--	--	--	--	--	--
JUL 08...	<.008	<.06	<.02	<.06	<1	21	K2	8	34	.2	<.04	<.1	<6
JUL 08...	<.008	<.06	<.02	<.06	<1	K13	K2	2	31	.2	<.04	<.1	<6
AUG 19...	<.008	<.06	<.02	<.06	K6	K15	K14	--	--	--	--	--	--
SEP 16...	<.008	<.06	<.02	<.06	K7	K12	110	--	--	--	--	--	--

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
OCT 24...	--	--	--	--	--	--	--	--
NOV 05...	<10	<.08	<1	E2.0	<.01	<.3	--	<1
DEC 05...	--	--	--	--	--	--	--	--
JAN 14...	E8	<.08	<1	3.2	.01	<.3	--	2
FEB 04...	--	--	--	--	--	--	--	--
MAR 27...	--	--	--	--	--	--	--	--
APR 16...	--	--	--	--	--	--	--	--
MAY 16...	102	.46	1	11.7	E.01	E.2	--	10
JUN 10...	--	--	--	--	--	--	--	--
JUL 08...	<10	E.05	<1	4.0	<.01	<.3	1	1
JUL 08...	<10	<.08	<1	3.9	.02	<.3	<1	1
AUG 19...	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°37'54", long 90°34'31", in NE ¼ SW ¼ NE ¼ sec.24, T.23 N., R.4 W., Butler County, Hydrologic Unit 11010008, approximately 5.0 mi below Beaver Dam Creek and 3.1 mi southeast of Fairdealing on Ball Mill Bridge.

DRAINAGE AREA.--194 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1980 to September 1986, November 1999 to current year.

PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: May 1981 to September 1986.

SUSPENDED-SEDIMENT DISCHARGE: July 1980 to September 1986.

EXTREMES FOR PERIOD OF DAILY RECORD.--

WATER TEMPERATURE: Minimum 30.0 °C several days in July 1980; minimum 0.0 °C on many days.

SUSPENDED-SEDIMENT CONCENTRATION: Maximum daily mean, 643 mg/L, Aug. 16, 1982; minimum daily mean, 1 mg/L on many days.

SUSPENDED-SEDIMENT LOAD: Maximum daily, 11,100 tons, Dec. 2, 1982; minimum daily, 0.12 tons, Dec. 19, 1982.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPECIFIC CONDUCTANCE WATER (µS/cm) (00095)	TEMPERATURE (deg C) (00010)	HARDNESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNESIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTASSIUM, DIS-SOLVED (mg/L as K) (00935)		
NOV 05...	1415	ENVIRONMENTAL	73	10.9	109	7.5	338	15.3	160	34.1	19.3	.57		
JAN 14...	1430	ENVIRONMENTAL	89	11.5	103	7.2	223	9.8	--	--	--	--		
MAR 27...	1055	ENVIRONMENTAL	2820	10.9	90	7.2	53	7.1	--	--	--	--		
MAY 16...	0945	ENVIRONMENTAL	554	7.9	83	7.1	91	17.5	44	9.39	4.90	.64		
JUL 08...	1715	ENVIRONMENTAL	45	4.6	59	7.7	263	28.1	--	--	--	--		
SEP 16...	1340	ENVIRONMENTAL	49	6.0	71	7.6	285	22.8	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICARBONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CARBONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLORIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUORIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUSPENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITROGEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITROGEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITROGEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 05...	2.45	156	156	191	0	2.81	<.1	2.8	26	172	<.04	.19	<.05	
JAN 14...	--	109	109	133	0	--	--	--	<10	--	<.04	E.09	.14	
MAR 27...	--	19	17	21	0	--	--	--	14	--	<.04	.34	.08	
MAY 16...	1.55	39	37	45	0	1.52	<.1	3.6	19	51	<.04	.34	.09	
JUL 08...	--	128	129	157	0	--	--	--	<10	--	<.04	.18	.07	
SEP 16...	--	142	143	175	0	--	--	--	<10	--	<.04	.14	E.02	
DATE		NITROGEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOSPHORUS DIS-SOLVED (mg/L as P) (00666)	PHOSPHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOSPHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLIFORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUMINUM, DIS-SOLVED (µg/L as Al) (01106)	ALUMINUM, TOTAL RECOVERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 05...	<.008	<.06	E.01	E.04	44	64	80	15	79	.4	<.04	<.1	<6	
JAN 14...	<.008	<.06	<.02	<.06	K12	33	K15	--	--	--	--	--	--	
MAR 27...	<.008	<.06	E.01	.06	960	1120	1060	--	--	--	--	--	--	
MAY 16...	E.004	<.06	E.01	E.04	130	192	213	207	194	.5	<.04	<.1	<6	
JUL 08...	<.008	<.06	.02	<.06	30	K70	K20	--	--	--	--	--	--	
SEP 16...	<.008	<.06	<.02	<.06	68	68	K10	--	--	--	--	--	--	

07068510 LITTLE BLACK RIVER BELOW FAIRDEALING, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV 05...	140	E.06	<1	78.7	<.01	<.3	--	1
JAN 14...	--	--	--	--	--	--	--	--
MAR 27...	--	--	--	--	--	--	--	--
MAY 16...	252	.32	M	43.5	E.01	<.3	--	5
JUL 08...	--	--	--	--	--	--	--	--
SEP 16...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## WHITE RIVER BASIN

07071000 GREER SPRING AT GREER, MO

LOCATION.--Lat 36°47'11", long 91°20'53", in SE ¼ SW ¼ sec.36, T.25 N., R.4 W., Oregon County, Hydrologic Unit 11010011, on right bank 300 ft downstream from lower outlet of spring, 1 mi north of Greer, and 1 mi upstream from Eleven Point River.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--August to December 1904, October 1921 to current year. August to December 1904, gage height and discharge measurements only. October to December 1921 monthly discharge only, published in WSP 1311.

GAGE.--Water-stage recorder. Datum of gage is 564.00 ft above National Geodetic Vertical Datum of 1929. Aug. 10 to Dec. 31, 1904, nonrecording gage at site 250 ft downstream at different datum; Nov. 17, 1921, to June 25, 1934, nonrecording gage at site 250 ft downstream at datum 0.74 ft lower than present datum.

REMARKS.--Water-discharge records fair. Occasional runoff from drainage area of 2.97 mi<sup>2</sup> included in record.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	116	113	119	217	485	245	576	564	565	465	413	366
2	116	112	116	205	476	246	571	558	563	463	410	363
3	116	110	116	199	460	265	566	554	561	459	406	361
4	116	109	113	193	432	270	558	546	557	455	402	358
5	116	111	113	187	403	269	551	545	557	453	400	355
6	114	112	113	182	379	266	544	540	556	449	396	352
7	113	112	114	175	362	265	539	539	552	444	392	352
8	113	111	115	171	349	262	667	782	551	440	389	348
9	114	110	113	168	340	469	655	658	547	437	386	346
10	115	111	113	162	330	557	625	616	545	434	384	343
11	116	111	113	158	317	555	608	587	545	433	383	343
12	116	110	114	156	308	549	590	584	543	431	380	339
13	118	110	126	152	298	542	586	681	539	429	390	338
14	118	111	129	150	287	533	799	631	535	427	439	336
15	116	110	129	145	279	527	734	598	533	424	441	333
16	115	110	185	144	271	534	700	587	529	422	432	331
17	113	110	421	140	264	533	684	657	527	420	420	329
18	115	110	437	137	258	525	665	672	523	416	412	327
19	116	110	409	136	257	600	638	634	522	427	410	327
20	115	110	372	134	293	784	620	613	517	470	404	324
21	113	110	346	133	305	695	612	592	510	476	397	323
22	114	111	330	130	294	648	596	586	504	471	390	320
23	116	113	315	131	285	625	586	586	500	465	387	316
24	116	114	301	190	279	602	585	582	496	458	383	314
25	113	111	290	198	273	592	580	580	491	451	389	311
26	111	111	278	190	264	657	580	580	488	444	388	310
27	110	110	267	185	256	626	578	578	483	438	382	310
28	110	111	257	179	250	601	575	575	478	432	378	306
29	110	118	245	173	---	583	570	574	474	427	374	303
30	110	123	232	167	---	582	569	570	467	422	370	301
31	112	---	224	267	---	580	---	569	---	417	368	---
MEAN	114	112	215	170	323	503	610	597	525	442	397	333
MAX	118	123	437	267	485	784	799	782	565	476	441	366
MIN	110	109	113	130	250	245	539	539	467	416	368	301

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	MEAN	258	283	305	327	347	396	445	443	401	336	296	269
MAX	448	586	750	648	652	674	724	776	861	611	563	503	
(WY)	1985	1985	1928	1928	1949	1975	1927	1927	1927	1945	1927	1928	
MIN	111	111	113	108	144	152	180	143	140	127	122	120	
(WY)	1957	1955	1956	1956	1981	1981	1936	1936	1936	1936	1936	1955	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1922 - 2002	
ANNUAL MEAN	184		362		342	
HIGHEST ANNUAL MEAN					566	
LOWEST ANNUAL MEAN					174	
HIGHEST DAILY MEAN	614	Feb 26	799	Apr 14	1010	Dec 3 1982
LOWEST DAILY MEAN	109	Nov 4	109	Nov 4	104	Nov 16 1956
ANNUAL SEVEN-DAY MINIMUM	110	Nov 15	110	Nov 15	105	Nov 13 1956
MAXIMUM PEAK FLOW	---		1600	May 8	1770	Dec 3 1982
MAXIMUM PEAK STAGE	---		2.80	May 8	2.97	Dec 3 1982
INSTANTANEOUS LOW FLOW	---		107	Nov 3-5	104	Nov 16 1956
10 PERCENT EXCEEDS	299		587		546	
50 PERCENT EXCEEDS	156		374		322	
90 PERCENT EXCEEDS	113		113		168	



07071000 GREER SPRING AT GREER, MO--Continued

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1993 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (percent saturation) (00301)	pH WATER WHOLE FIELD (standard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DEC 03...	1100	ENVIRONMENTAL	118	7.1	72	7.5	366	14.8	210	42.8	24.3	.55		
MAR 18...	1310	ENVIRONMENTAL	522	8.6	86	7.2	218	14.1	110	22.3	12.2	.76		
MAY 20...	1135	ENVIRONMENTAL	610	8.6	84	7.0	176	13.6	77	16.4	8.77	E.10		
AUG 26...	1210	ENVIRONMENTAL	389	8.7	87	7.3	310	14.3	170	35.1	19.6	1.51		
DATE	TIME	SAMPLE TYPE	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SILICA, DIS-SOLVED (mg/L as SiO <sub>2</sub> ) (00955)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)
DEC 03...	2.07	191	191	233	0	7.52	E.1	8.6	2.9	<10	198	E.02	E.09	
MAR 18...	1.93	106	106	130	0	3.02	<.1	--	2.6	<10	127	<.04	.15	
MAY 20...	2.48	83	84	103	0	2.28	<.1	--	2.5	<10	104	<.04	.10	
AUG 26...	1.43	150	151	185	0	2.63	<.1	--	2.0	<10	171	<.04	<.10	
DATE	TIME	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	ORTHO-PHOS-PHATE, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µM-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	BARIUM, DIS-SOLVED (µg/L as Ba) (01005)	BERYL-LIUM, DIS-SOLVED (µg/L as Be) (01010)
DEC 03...	.46	<.008	<.06	E.01	<.06	K1	<1	K2	8	13	.4	--	--	
MAR 18...	.88	<.008	E.03	<.02	E.05	K25	K40	K52	67	211	.3	--	--	
MAY 20...	.74	<.008	<.06	E.01	<.06	44	K73	325	50	166	<.2	--	--	
AUG 26...	1.00	<.008	<.06	E.01	<.06	K10	37	LA	1	39	.3	--	--	
DATE	TIME	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	CHRO-MIUM, DIS-SOLVED (µg/L as Cr) (01030)	COBALT, DIS-SOLVED (µg/L as Co) (01035)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)	IRON, DIS-SOLVED (µg/L as Fe) (01046)	LEAD, DIS-SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV-ERABLE (µg/L as Pb) (01051)	LITHIUM DIS-SOLVED (µg/L as Li) (01130)	MANGA-NESE, DIS-SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV-ERABLE (µg/L as Hg) (71900)	MOLYB-DENUM, DIS-SOLVED (µg/L as Mo) (01060)	NICKEL, DIS-SOLVED (µg/L as Ni) (01065)
DEC 03...	.08	<.1	--	--	E5	<10	.25	<1	--	<2.0	<.01	--	--	
MAR 18...	<.04	<.1	--	--	<6	38	.17	M	--	3.3	<.01	--	--	
MAY 20...	<.04	<.1	--	--	<6	40	.20	M	--	4.2	<.01	--	--	
AUG 26...	E.02	<.1	--	--	<6	<10	<.08	<1	--	<2.0	<.01	--	--	

07071000 GREER SPRING AT GREER, MO--Continued

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	STRON- TIUM, DIS- SOLVED (µg/L as Sr) (01080)	VANA- DIUM, DIS- SOLVED (µg/L as V) (01085)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	2,6-DI- ETHYL ANILINE WAT FLT 0.7 µ (µg/L) (82660)	ACETO- CHLOR, WATER FLTRD REC (µg/L) (49260)	ALA- CHLOR, WATER, DISS, REC, (µg/L) (46342)	ALPHA BHC DIS- SOLVED (µg/L) (34253)	ATRA- ZINE, WATER, DISS, REC (µg/L) (39632)	BEN- FLUR- ALIN WAT FLD 0.7 µ (µg/L) (82673)	BUTYL- ATE, WATER, DISS, REC (µg/L) (04028)	CAR- BARYL WATER FLTRD 0.7 µ (µg/L) (82680)
DEC 03...	E.2	35.4	--	--	3	<.002	<.004	<.002	<.005	<.007	<.010	<.002	<.041
MAR 18...	<.3	--	--	--	4	<.006	<.006	<.004	<.005	<.007	<.010	<.002	<.041
MAY 20...	<.3	--	--	--	4	<.006	<.006	<.004	<.005	.138	<.010	<.002	<.041
AUG 26...	E.2	--	--	2	2	<.006	<.006	<.004	<.005	E.007	<.010	<.002	<.041
DATE	CARBO- FURAN WATER FLTRD 0.7 µ GF, REC (µg/L) (82674)	CHLOR- PYRIFOS DIS- SOLVED (µg/L) (38933)	CYANA- ZINE, WATER, DISS, REC (µg/L) (04041)	DCPA WATER, FLTRD 0.7 µ GF, REC (µg/L) (82682)	DEETHYL ATRA- ZINE, WATER, DISS, REC (µg/L) (04040)	DI- AZINON, DIS- SOLVED (µg/L) (39572)	DI- ELDRIN DIS- SOLVED (µg/L) (39381)	DISUL- FOTON WATER FLTRD 0.7 µ GF, REC (µg/L) (82677)	EPTC WATER FLTRD 0.7 µ GF, REC (µg/L) (82668)	ETHAL- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82663)	ETHO- PROP WATER FLTRD 0.7 µ GF, REC (µg/L) (82672)	FONOFOS WATER DISS REC (µg/L) (04095)	LINDANE DIS- SOLVED (µg/L) (39341)
DEC 03...	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
MAR 18...	<.020	<.005	<.018	<.003	<.006	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
MAY 20...	<.020	<.005	<.018	<.003	E.018	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
AUG 26...	<.020	<.005	<.018	<.003	E.004	<.005	<.005	<.02	<.002	<.009	<.005	<.003	<.004
DATE	LIN- URON WATER FLTRD 0.7 µ GF, REC (µg/L) (82666)	MALA- THION, DIS- SOLVED (µg/L) (39532)	METHYL AZIN- PHOS WAT FLT 0.7 µ GF, REC (µg/L) (82686)	METHYL PARA- THION WAT FLT 0.7 µ GF, REC (µg/L) (82667)	METO- LACHLOR WATER DISSOLV (µg/L) (39415)	METRI- BUZIN WATER DISSOLV (µg/L) (82630)	MOL- INATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82671)	NAPROP- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82684)	P,P' DDE DISSOLV (µg/L) (34653)	PARA- THION, DIS- SOLVED (µg/L) (39542)	PEB- ULATE WATER FILTRD 0.7 µ GF, REC (µg/L) (82669)	PENDI- METH- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82683)	PER- METHRIN CIS WAT FLT 0.7 µ GF, REC (µg/L) (82687)
DEC 03...	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.007	<.002	<.010	<.006
MAR 18...	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
MAY 20...	<.035	<.027	<.050	<.006	E.005	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
AUG 26...	<.035	<.027	<.050	<.006	<.013	<.006	<.002	<.007	<.003	<.010	<.004	<.022	<.006
DATE	PHORATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82664)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PRON- AMIDE WATER FLTRD 0.7 µ GF, REC (µg/L) (82676)	PROPA- CHLOR, WATER, DISS, REC (µg/L) (04024)	PRO- PANIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82679)	PRO- PARGITE WATER FLTRD 0.7 µ GF, REC (µg/L) (82685)	SI- MAZINE, WATER, DISS, REC (µg/L) (04035)	TEBU- THIURON WATER FLTRD 0.7 µ GF, REC (µg/L) (82670)	TER- BACIL WATER FLTRD 0.7 µ GF, REC (µg/L) (82665)	TER- BUFOS WATER FLTRD 0.7 µ GF, REC (µg/L) (82675)	THIO- BENCARB WATER FLTRD 0.7 µ GF, REC (µg/L) (82681)	TRIAL- LATE WATER FLTRD 0.7 µ GF, REC (µg/L) (82678)	TRI- FLUR- ALIN WAT FLT 0.7 µ GF, REC (µg/L) (82661)
DEC 03...	<.011	<.01	<.004	<.010	<.011	<.02	<.011	<.02	<.034	<.02	<.005	<.002	<.009
MAR 18...	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
MAY 20...	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009
AUG 26...	<.011	<.01	<.004	<.010	<.011	<.02	<.005	<.02	<.034	<.02	<.005	<.002	<.009

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

&lt;--Numeric result is less than the value shown.

LA--Laboratory accident.

07071500 ELEVEN POINT RIVER NEAR BARDLEY, MO

LOCATION.--Lat 36°38'55", long 91°12'03", in NE ¼ SE ¼ sec.17, T.23 N., R.2 W., Oregon County, Hydrologic Unit 11010011, on downstream side of right pier of main truss of bridge on U.S. Highway 160, 7.0 mi southwest of Bardley, 7.5 mi upstream from Fredericks Fork, and at mile 53.7.

DRAINAGE AREA.--793 mi<sup>2</sup>.

## WATER-DISCHARGE RECORDS

PERIOD OF RECORD.--October 1921 to current year. October 1921 monthly discharge only, published in WSP 1311.

REVISED RECORDS.--WSP 827: 1927-28, 1935. WSP 927: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 410.84 ft above National Geodetic Vertical Datum of 1929. Prior to June 26, 1934, nonrecording gage at site 100 ft upstream at datum 0.06 ft higher; June 26, 1934, to Oct. 19, 1939, nonrecording gage at present site and datum.

REMARKS.--Water-discharge records good. U.S. Army Corps of Engineers satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Maximum stage, 19.7 ft, August 1915, from floodmarks, discharge, 44,000 ft<sup>3</sup>/s, from rating curve extended above 25,000 ft<sup>3</sup>/s.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	184	187	268	374	3370	430	1460	1110	1410	791	665	543
2	184	192	241	359	1620	442	1380	1080	1360	777	655	536
3	184	186	225	348	1250	463	1280	1030	1320	766	641	529
4	184	183	216	335	1060	490	1180	1000	1290	757	629	526
5	194	183	206	330	928	487	1120	968	1300	746	618	518
6	189	182	216	329	850	479	1070	952	1330	732	610	511
7	184	183	214	314	789	471	1050	991	1240	718	605	506
8	183	183	229	305	729	463	3250	12300	1190	709	594	501
9	183	181	227	300	688	1730	3490	15500	1180	701	586	497
10	191	181	220	295	655	2210	2240	4840	1200	695	580	495
11	208	181	214	285	613	1550	1880	3210	1160	691	573	494
12	202	180	219	280	584	1600	1700	2630	1120	704	571	488
13	220	180	232	275	555	1520	1600	7290	1110	714	664	483
14	212	180	278	273	527	1400	6110	5470	1070	685	1910	480
15	204	181	301	265	509	1290	4170	3240	1040	721	1030	496
16	199	179	499	262	491	1710	2540	2650	1020	713	850	495
17	192	179	2100	258	470	1590	2120	5890	1030	690	776	485
18	191	180	1580	255	453	1370	1880	6420	998	687	729	e480
19	192	183	1130	259	467	2770	1750	3820	964	905	709	e550
20	193	180	907	252	570	9370	1640	2960	938	1230	677	e500
21	192	179	774	250	603	5440	1570	2530	915	1010	650	e560
22	191	179	695	244	569	2870	1480	2280	893	883	630	e500
23	193	181	633	256	539	2270	1410	2110	881	823	615	465
24	197	213	583	566	522	1980	1370	1980	870	794	622	449
25	195	204	547	629	507	1970	1300	1870	865	756	639	445
26	189	202	513	529	484	3300	1250	1760	849	739	627	445
27	185	193	488	473	459	2670	1220	1680	841	717	606	449
28	184	216	464	437	442	2210	1200	1620	856	697	589	444
29	184	252	437	411	---	1950	1140	1570	846	682	575	437
30	184	290	410	386	---	1740	1120	1510	811	673	563	433
31	185	---	390	716	---	1580	---	1450	---	667	552	---
MEAN	192	192	505	350	761	1930	1866	3346	1063	760	688	491
MAX	220	290	2100	716	3370	9370	6110	15500	1410	1230	1910	560
MIN	183	179	206	244	442	430	1050	952	811	667	552	433
IN.	0.28	0.27	0.73	0.51	1.00	2.81	2.63	4.87	1.50	1.11	1.00	0.69

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1922 - 2002, BY WATER YEAR (WY)

	MEAN	MAX	(WY)	MIN	(WY)
1922	422	1291	1985	168	1957
1923	593	2082	1994	176	1957
1924	708	4048	1983	170	1956
1925	785	3007	1985	159	1956
1926	835	2223	1949	224	1963
1927	1071	3556	1945	264	1981
1928	1311	5037	1927	340	1981
1929	1171	3346	2002	266	1936
1930	882	3107	1928	245	1936
1931	607	1559	1951	213	1936
1932	487	1354	1927	199	1936
1933	433	1183	1975	181	1956

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1922 - 2002
ANNUAL MEAN	317	1015	775
HIGHEST ANNUAL MEAN			1782
LOWEST ANNUAL MEAN			303
HIGHEST DAILY MEAN	2100	Dec 17	26800
LOWEST DAILY MEAN	179	Nov 16,17,21,22	155
ANNUAL SEVEN-DAY MINIMUM	180	Nov 12	157
MAXIMUM PEAK FLOW	---	27700	49800
MAXIMUM PEAK STAGE	---	16.43	21.64
INSTANTANEOUS LOW FLOW	---	178	152
ANNUAL RUNOFF (INCHES)	5.44	17.38	13.27
10 PERCENT EXCEEDS	519	1970	1420
50 PERCENT EXCEEDS	247	615	552
90 PERCENT EXCEEDS	186	190	263

e Estimated

## WHITE RIVER BASIN

07071500 ELEVEN POINT RIVER NEAR BARDLEY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--November 1993 to current year.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, DIS-SOLVED (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)	
NOV 26...	1205	BLANK	--	--	--	--	--	--	--	--	--	--	
JAN 07...	1210	ENVIRONMENTAL	198	8.5	79	8.0	362	11.3	190	38.6	22.0	<.10	
MAR 21...	1140	ENVIRONMENTAL	315	12.1	104	7.5	327	8.4	--	--	--	--	
MAY 21...	1030	ENVIRONMENTAL	5280	9.4	86	7.4	158	11.1	--	--	--	--	
JUL 22...	1020	ENVIRONMENTAL	2550	9.0	89	7.4	204	14.0	90	19.2	10.2	.11	
SEP 16...	1200	ENVIRONMENTAL	877	10.2	115	7.9	326	19.4	--	--	--	--	
	1155	ENVIRONMENTAL	499	9.5	102	7.7	342	18.6	--	--	--	--	
DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDE (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 26...	--	--	--	--	--	--	--	--	<10	--	E.02	<.10	<.05
JAN 07...	2.27	199	201	245	0	2.78	E.1	2.5	<10	202	<.04	E.07	.24
MAR 21...	--	153	153	187	0	--	--	--	<10	--	<.04	<.10	.69
MAY 21...	--	72	73	89	0	--	--	--	69	--	<.04	.43	.46
JUL 22...	2.37	103	102	125	0	1.81	<.1	2.6	<10	123	<.04	.15	.43
SEP 16...	--	170	170	208	0	--	--	--	<10	--	<.04	E.08	.60
	--	163	163	199	0	--	--	--	<10	--	<.04	E.09	.60
DATE	NITRO-GEN, DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF (col./ 100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 26...	<.008	<.06	<.02	<.06	--	--	--	6	8	<.2	<.04	<.1	<6
JAN 07...	<.008	<.06	<.02	<.06	K1	K6	K15	6	11	.3	<.04	<.1	<6
MAR 21...	<.008	<.06	<.02	<.06	K1	K3	K3	--	--	--	--	--	--
MAY 21...	E.006	E.03	.02	.09	K210	1000	747	--	--	--	--	--	--
JUL 22...	.012	<.06	<.02	<.06	K53	184	306	40	128	<.2	E.02	<.1	<6
SEP 16...	E.005	<.06	<.02	<.06	K14	68	K31	--	--	--	--	--	--
	<.008	<.06	<.02	<.06	K2	K13	K6	--	--	--	--	--	--

07071500 ELEVEN POINT RIVER NEAR BARDLEY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
26...	<10	<.08	<1	<2.0	<.01	<.3	--	3
26...	E7	<.08	<1	3.8	<.01	<.3	--	3
JAN								
07...	--	--	--	--	--	--	--	--
MAR								
21...	--	--	--	--	--	--	--	--
MAY								
21...	54	.98	3	9.6	<.01	<.3	--	4
JUL								
22...	--	--	--	--	--	--	--	--
SEP								
16...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

<--Numeric result is less than the value shown.

## ARKANSAS RIVER BASIN

07185765 SPRING RIVER AT CARTHAGE, MO

LOCATION.--Lat 37°11'11", long 94°19'56", in SW ¼ NW ¼ SW ¼ sec.33, T.29 N., R.31 W., Jasper County, Hydrologic Unit 11070207, on left downstream wingwall of St. Francis Street bridge 0.8 mi northwest of junction with Highway 96 in Carthage.

DRAINAGE AREA.--425 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1966 to Sept. 30, 1980, May 23, 2001 to current year. Occasional discharge measurements 1951-1954. Intermittent gage readings since Oct. 31, 1945, collected by Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is unknown. Jan. 26, 1967 to September 1980, gage located approximately 0.75 mi upstream, at datum of 923.68 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 26, 1967, nonrecording gage at site 0.87 mi upstream of current site, at former datum.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 22.0 ft by highwater mark 1 mi upstream.

EXTREMES FOR CURRENT YEAR.-- For period May 23 to Sept. 30, maximum discharge 598 ft<sup>3</sup>/s, June 3, gage height, 4.27 ft; minimum, 33 ft<sup>3</sup>/s, Sept. 6 and 7.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	---	---	---	---	---	---	---	---	163	147	110	42
2	---	---	---	---	---	---	---	---	159	135	99	42
3	---	---	---	---	---	---	---	---	282	127	91	40
4	---	---	---	---	---	---	---	---	225	116	81	38
5	---	---	---	---	---	---	---	---	191	111	77	36
6	---	---	---	---	---	---	---	---	167	107	71	34
7	---	---	---	---	---	---	---	---	154	99	70	38
8	---	---	---	---	---	---	---	---	145	91	86	44
9	---	---	---	---	---	---	---	---	139	89	84	52
10	---	---	---	---	---	---	---	---	133	86	73	64
11	---	---	---	---	---	---	---	---	127	82	69	62
12	---	---	---	---	---	---	---	---	119	79	66	53
13	---	---	---	---	---	---	---	---	111	77	61	49
14	---	---	---	---	---	---	---	---	120	75	58	46
15	---	---	---	---	---	---	---	---	128	74	53	42
16	---	---	---	---	---	---	---	---	129	71	54	41
17	---	---	---	---	---	---	---	---	117	80	54	46
18	---	---	---	---	---	---	---	---	108	78	53	50
19	---	---	---	---	---	---	---	---	101	72	48	46
20	---	---	---	---	---	---	---	---	119	67	45	43
21	---	---	---	---	---	---	---	---	147	61	44	48
22	---	---	---	---	---	---	---	---	327	61	41	45
23	---	---	---	---	---	---	---	---	260	244	58	43
24	---	---	---	---	---	---	---	---	231	194	54	41
25	---	---	---	---	---	---	---	---	212	168	53	40
26	---	---	---	---	---	---	---	197	152	84	44	51
27	---	---	---	---	---	---	---	186	144	141	42	67
28	---	---	---	---	---	---	---	177	158	201	39	66
29	---	---	---	---	---	---	---	168	219	194	39	66
30	---	---	---	---	---	---	---	176	169	144	47	64
31	---	---	---	---	---	---	---	175	---	126	44	---
MEAN	---	---	---	---	---	---	---	---	162	98.1	60.4	48.0
MAX	---	---	---	---	---	---	---	---	327	201	110	67
MIN	---	---	---	---	---	---	---	---	101	53	39	34
IN.	---	---	---	---	---	---	---	---	0.43	0.27	0.16	0.13

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

MEAN	231	501	389	331	429	701	545	483	418	262	131	218
MAX	561	1785	1475	908	1567	1854	1701	1186	1343	1038	296	625
(WY)	1974	1973	1974	1973	1975	1973	1973	1979	1974	1976	1979	1971
MIN	72.5	65.8	57.7	50.0	104	108	138	174	70.8	49.3	53.4	46.3
(WY)	1967	1977	1977	1977	1977	1972	1977	1971	1972	1972	1972	1980

## SUMMARY STATISTICS

## FOR PERIOD OF RECORD

ANNUAL MEAN	390	
HIGHEST ANNUAL MEAN	836	1973
LOWEST ANNUAL MEAN	168	1977
HIGHEST DAILY MEAN	11800	Nov 25 1973
LOWEST DAILY MEAN	34	Sep 6 2001
ANNUAL SEVEN-DAY MINIMUM	39	Sep 1 2001
MAXIMUM PEAK FLOW	24800	Nov 1 1972
MAXIMUM PEAK STAGE	17.15	Nov 1 1972
INSTANTANEOUS LOW FLOW	33	Sep 6,7 2001
ANNUAL RUNOFF (INCHES)	12.46	
10 PERCENT EXCEEDS	749	
50 PERCENT EXCEEDS	210	
90 PERCENT EXCEEDS	77	

## 07185765 SPRING RIVER AT CARTHAGE, MO--Continued

LOCATION.--Lat 37°11'11", long 94°19'56", in SW 1/4 NW 1/4 SW 1/4 sec.33, T.29 N., R.31 W., Jasper County, Hydrologic Unit 11070207, on left downstream wingwall of St. Francis Street bridge 0.8 mi northwest of junction with Highway 96 in Carthage.

DRAINAGE AREA.--425 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1966 to Sept. 30, 1980, May 23, 2001 to current year. Occasional discharge measurements 1951-1954. Intermittent gage readings since Oct. 31, 1945, collected by Corps of Engineers.

GAGE.--Water-stage recorder. Datum of gage is unknown. Jan. 26, 1967 to September 1980, gage located approximately 0.75 mi upstream, at datum of 923.68 ft above National Geodetic Vertical Datum of 1929. Prior to Jan. 26, 1967, nonrecording gage at site 0.87 mi upstream of current site, at former datum.

REMARKS.--Records good. U.S.G.S. satellite telemeter at station.

EXTREMES OUTSIDE PERIOD OF RECORD.--Flood of May 18, 1943, reached a stage of 22.0 ft by highwater mark 1 mi upstream.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	60	93	136	239	1450	263	419	382	858	319	181	100
2	62	225	143	228	1020	298	400	361	795	311	171	98
3	63	314	146	218	839	322	376	335	740	316	166	102
4	62	276	145	210	728	315	353	315	692	311	159	100
5	104	241	142	205	642	326	339	300	666	302	155	96
6	86	215	137	200	593	400	326	285	647	282	154	95
7	86	194	131	194	558	436	323	591	600	264	164	90
8	85	179	126	186	520	428	336	11200	562	252	166	87
9	108	165	120	182	489	419	360	9980	806	249	151	86
10	2880	153	116	178	457	396	349	3210	842	239	150	85
11	1490	143	113	171	423	378	331	1560	621	262	147	83
12	447	136	132	165	402	368	321	1750	791	262	143	80
13	342	129	185	160	382	356	341	4850	806	543	145	79
14	271	122	247	156	361	345	453	2220	1370	356	147	84
15	228	117	269	151	347	333	427	1440	848	275	144	84
16	199	112	295	147	332	319	380	1240	686	245	136	83
17	178	109	879	142	317	306	361	2970	612	261	150	85
18	162	112	992	140	304	297	338	3760	562	274	148	80
19	149	121	724	140	313	305	331	1810	522	400	157	109
20	138	111	586	136	356	376	894	1420	489	453	144	101
21	128	108	513	133	336	419	1360	1230	461	344	135	89
22	120	107	467	130	313	384	838	1100	434	277	126	83
23	117	107	424	131	303	373	658	1010	415	287	120	77
24	128	109	387	131	296	373	572	2430	402	263	123	76
25	151	129	360	129	286	831	510	3220	386	237	119	74
26	131	142	337	125	275	781	483	1370	441	222	119	71
27	119	139	318	123	265	592	477	1150	400	211	119	70
28	110	134	302	121	258	537	454	1040	375	198	112	70
29	104	132	285	120	---	506	412	1240	353	192	108	68
30	99	132	266	178	---	475	384	1090	331	191	105	64
31	96	---	251	1640	---	443	---	943	---	187	102	---
MEAN	274	150	312	210	470	410	464	2123	617	283	141	85.0
MAX	2880	314	992	1640	1450	831	1360	11200	1370	543	181	109
MIN	60	93	113	120	258	263	321	285	331	187	102	64
IN.	0.74	0.39	0.85	0.57	1.15	1.11	1.22	5.76	1.62	0.77	0.38	0.22

## STATISTICS OF MONTHLY MEAN DATA FOR PERIOD OF RECORD, BY WATER YEAR (WY)

	234	477	384	323	432	682	540	592	431	263	131	210
MEAN	234	477	384	323	432	682	540	592	431	263	131	210
MAX	561	1785	1475	908	1567	1854	1701	2123	1343	1038	296	625
(WY)	1974	1973	1974	1973	1975	1973	1973	2002	1974	1976	1979	1971
MIN	72.5	65.8	57.7	50.0	104	108	138	174	70.8	49.3	53.4	46.3
(WY)	1967	1977	1977	1977	1977	1972	1977	1971	1972	1972	1972	1980

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

## FOR PERIOD OF RECORD

ANNUAL MEAN	463	395
HIGHEST ANNUAL MEAN		836
LOWEST ANNUAL MEAN		168
HIGHEST DAILY MEAN	11200	May 8
LOWEST DAILY MEAN	60	Oct 1
ANNUAL SEVEN-DAY MINIMUM	70	Sep 24
MAXIMUM PEAK FLOW	20000 <sup>a</sup>	May 8
MAXIMUM PEAK STAGE	14.97	May 8
INSTANTANEOUS LOW FLOW	58	Oct 1
ANNUAL RUNOFF (INCHES)	14.79	12.62
10 PERCENT EXCEEDS	844	754
50 PERCENT EXCEEDS	274	213
90 PERCENT EXCEEDS	100	78

<sup>a</sup> From rating extended above 11,000 ft<sup>3</sup>/s.

<sup>b</sup> Former datum.

## ARKANSAS RIVER BASIN

07186000 SPRING RIVER NEAR WACO, MO

LOCATION.--Lat 37°14'44", long 94°33'58", on line between SE 1/2 sec.7 and NE 1/2 sec.18, T.29 N., R.33 W., Jasper County, Hydrologic Unit 11070207, on downstream side of left pier of county highway bridge, 0.8 mi downstream from Blackberry Creek, 1.5 mi east of Waco, and 47.6 mi upstream from mouth.

DRAINAGE AREA.--1,164 mi<sup>2</sup>.

PERIOD OF RECORD.--April 1924 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder. Datum of gage is 833.23 ft above National Geodetic Vertical Datum of 1929. Prior to Feb. 23, 1935, nonrecording gage at same site and datum.

REMARKS.--Records fair except for estimated daily discharges, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	e108	e204	e183	305	7500	363	626	624	1140	379	186	94
2	e108	2370	e189	287	4640	540	584	577	1030	365	172	93
3	e108	1600	e192	273	2040	795	544	516	948	351	163	93
4	e108	771	e193	265	1280	740	502	466	873	346	156	96
5	560	528	e189	246	1080	747	468	431	815	337	152	93
6	1400	414	e185	240	968	1830	447	409	787	320	152	93
7	508	347	e181	236	905	1730	438	632	741	293	150	91
8	e189	303	e179	233	844	1160	454	18100	693	287	156	85
9	304	265	e176	228	779	929	492	32900	2460	277	362	83
10	6850	241	e173	224	720	827	507	24100	3890	273	140	85
11	7080	221	e170	218	659	718	475	15200	1520	266	142	84
12	2880	214	e185	211	617	661	448	5380	4610	277	137	82
13	1020	e196	214	207	580	620	429	12700	3560	282	141	79
14	589	e185	338	202	547	585	524	11600	5080	563	143	80
15	444	e181	432	199	513	547	584	6110	2340	339	141	82
16	360	e175	477	198	485	509	514	3580	1320	307	137	82
17	312	e173	1080	198	456	475	487	8710	1010	299	136	82
18	278	e189	1730	196	436	453	457	11200	866	308	181	84
19	252	e189	1260	195	454	457	436	7120	766	313	151	94
20	235	e186	898	e192	604	530	861	3270	695	398	146	126
21	221	e178	737	e189	658	649	2730	1870	635	450	138	98
22	e208	e167	654	e186	579	648	1940	1560	585	369	132	86
23	e198	e162	589	e188	508	561	1110	1370	540	465	126	84
24	214	e165	532	e186	462	528	872	7990	507	563	125	79
25	212	e186	483	e183	429	928	748	12100	478	475	124	77
26	e198	e192	444	e180	403	1560	689	5080	474	359	118	73
27	e191	e194	419	e176	382	1190	708	2530	614	284	116	70
28	e185	e191	399	e173	362	899	1100	1680	543	e245	111	68
29	e181	e186	372	e174	---	804	1030	1570	455	220	104	67
30	e173	e180	346	354	---	734	725	1540	407	212	100	64
31	e175	---	323	8410	---	670	---	1290	---	200	98	---
MEAN	834	358	449	482	1068	787	731	6523	1346	336	146	84.9
MAX	7080	2370	1730	8410	7500	1830	2730	32900	5080	563	362	126
MIN	108	162	170	173	362	363	429	409	407	200	98	64
IN.	0.83	0.34	0.44	0.48	0.96	0.78	0.70	6.46	1.29	0.33	0.14	0.08

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1924 - 2002, BY WATER YEAR (WY)

	MEAN	667	946	712	712	944	1215	1465	1610	1400	708	428	555
MAX	6997	6726	4704	3222	6372	5809	7542	11640	5521	4323	7812	10260	
(WY)	1942	1986	1993	1973	1985	1973	1927	1943	1928	1976	1927	1993	
MIN	21.0	30.5	33.3	29.7	31.0	33.6	38.2	120	73.4	15.2	7.71	22.0	
(WY)	1957	1954	1964	1964	1964	1954	1956	1932	1954	1954	1954	1956	

SUMMARY STATISTICS FOR 2001 CALENDAR YEAR FOR 2002 WATER YEAR WATER YEARS 1924 - 2002

ANNUAL MEAN	754	1101	940
HIGHEST ANNUAL MEAN			3093
LOWEST ANNUAL MEAN			61.4
HIGHEST DAILY MEAN	18700	Feb 25	108000
LOWEST DAILY MEAN	73	Sep 7	4.5
ANNUAL SEVEN-DAY MINIMUM	77	Sep 1	71
MAXIMUM PEAK FLOW	---	35900	May 9
MAXIMUM PEAK STAGE	---	24.74	May 9
INSTANTANEOUS LOW FLOW	---	61	Sep 30
ANNUAL RUNOFF (INCHES)	8.80	12.84	10.97
10 PERCENT EXCEEDS	1540	1730	1810
50 PERCENT EXCEEDS	272	382	300
90 PERCENT EXCEEDS	88	110	66

e Estimated

<sup>a</sup> From rating extended above 85,000 ft<sup>3</sup>/s.



## ARKANSAS RIVER BASIN

507

07186480 CENTER CREEK NEAR SMITHFIELD, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°09'20", long 94°36'10", in NW ¼ SE ¼ NE ¼ sec.14, T.28 N., R.34 W., Jasper County, Hydrologic Unit 11070207, approximately 1.0 mi above the mouth of Center Creek, 1.0 mi south of Smithfield on county road.

DRAINAGE AREA.--303 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1968 to July 1975, July 1977 to June 1989, April 1993 to August 1995, November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV														
28...	0830	BLANK	--	--	--	--	--	--	--	.09	.011	<.10		
28...	0900	ENVIRONMENTAL	79	10.9	94	7.8	432	7.7	200	74.2	3.92	1.17		
JAN														
08...	0845	ENVIRONMENTAL	105	13.6	104	7.8	264	2.9	--	--	--	--		
08...	0900	BLANK	--	--	--	--	--	--	--	--	--	--		
FEB														
12...	0855	ENVIRONMENTAL	263	12.6	104	7.1	351	6.1	--	--	--	--		
12...	0856	BLANK	--	--	--	--	--	--	--	--	--	--		
MAR														
12...	1300	BLANK	--	--	--	--	--	--	--	--	--	--		
12...	1355	ENVIRONMENTAL	273	12.1	111	8.0	365	10.2	--	--	--	--		
APR														
16...	1430	BLANK	--	--	--	--	--	--	--	--	--	--		
16...	1445	ENVIRONMENTAL	192	9.8	113	8.1	372	20.4	--	--	--	--		
MAY														
22...	0845	BLANK	--	--	--	--	--	--	--	.09	.010	<.10		
22...	1010	ENVIRONMENTAL	973	8.3	86	8.0	314	15.8	150	54.6	2.56	1.51		
JUN														
18...	1145	BLANK	--	--	--	--	--	--	--	--	--	--		
18...	1230	ENVIRONMENTAL	453	9.7	110	7.7	337	20.0	--	--	--	--		
JUL														
23...	1500	BLANK	--	--	--	--	--	--	--	.03	E.006	<.10		
23...	1600	ENVIRONMENTAL	349	9.2	117	7.7	342	26.2	150	57.2	2.43	3.35		
SEP														
10...	1445	ENVIRONMENTAL	51	10.6	137	8.1	384	27.0	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV														
28...	.49	--	--	--	--	--	<.30	<.1	E.1	<10	<10	<.04	<.10	<.05
28...	7.83	150	150	183	0	11.8	.2	45.5	20	262	262	<.04	.14	2.02
JAN														
08...	--	133	134	164	0	--	--	--	<10	--	--	E.03	.15	3.15
08...	--	--	--	--	--	--	--	--	<10	--	--	<.04	<.10	<.05
FEB														
12...	--	169	170	208	0	--	--	--	<10	--	--	<.04	.12	E3.11
12...	--	--	--	--	--	--	--	--	<10	--	--	<.04	<.08	<.05
MAR														
12...	--	--	--	--	--	--	--	--	<10	--	--	<.04	<.10	<.05
12...	--	124	124	152	0	--	--	--	<10	--	--	<.04	.27	2.42
APR														
16...	--	--	--	--	--	--	--	--	<10	--	--	<.04	<.10	<.05
16...	--	134	134	164	0	--	--	--	<10	--	--	<.04	.21	1.88
MAY														
22...	.51	--	--	--	--	--	<.30	<.1	.3	<10	<10	<.04	<.10	<.05
22...	4.43	116	117	143	0	6.13	.1	21.7	26	190	190	<.04	.22	2.04
JUN														
18...	--	--	--	--	--	--	--	--	<10	--	--	<.04	<.10	<.05
18...	--	120	120	147	0	--	--	--	14	--	--	<.04	.28	2.27
JUL														
23...	<.09	--	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05
23...	3.96	90	91	111	0	5.95	.2	64.3	E63	227	227	<.04	.57	1.37
SEP														
10...	--	139	140	171	0	--	--	--	<10	--	--	<.04	.14	2.07

## ARKANSAS RIVER BASIN

07186480 CENTER CREEK NEAR SMITHFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHORUS DIS- SOLVED (mg/L as P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER 100 mL) (31673)	ALUM- INUM, DIS- SOLVED (µg/L as Al) (01106)	ALUM- INUM, TOTAL RECOV- ERABLE (µg/L as Al) (01105)	ARSENIC DIS- SOLVED (µg/L as As) (01000)	CADMIUM DIS- SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS- SOLVED (µg/L as Cu) (01040)	
	NOV 28...	<.008	<.06	<.02	<.06	--	--	--	5	7	<.2	<.04	<.1	<.6
	28...	E.004	.08	.07	.10	K10	K86	40	10	30	.2	.88	1.2	<.6
JAN 08...	E.005	E.06	.06	.07	41	190	45	--	--	--	--	--	--	
08...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--	
FEB 12...	E.004	E.06	E.05	.07	K20	K24	40	--	--	--	--	--	--	
12...	<.006	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--	
MAR 12...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--	
12...	E.004	E.04	.03	E.04	K3	K1	K5	--	--	--	--	--	--	
APR 16...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--	
16...	.011	.06	.04	E.06	LA	36	K16	--	--	--	--	--	--	
MAY 22...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	<.1	<.6	
22...	.008	E.06	.04	.09	110	156	264	53	290	.3	1.45	2.4	<.6	
JUN 18...	<.008	<.06	<.02	<.06	--	--	--	--	--	--	--	--	--	
18...	E.005	.07	.05	.09	68	98	80	--	--	--	--	--	--	
JUL 23...	<.008	<.06	<.02	<.06	--	--	--	<1	<2	<.2	<.04	<.1	<.6	
23...	E.007	.12	.10	.20	590	2700	5600	3	579	.4	1.59	5.7	E3	
SEP 10...	E.005	.15	.14	.16	68	K4	20	--	--	--	--	--	--	
DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)	1,4-DI- CHLORO- BENZENE DISSOLV (µg/L) (34572)	1METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62054)	26DIMET NAPH- THALENE WATER, FLTRD REC (µg/L) (62055)	2METHYL NAPH- THALENE WATER, FLTRD REC (µg/L) (62056)	3-BETA- COPRO- STANOL, WATER, FLTRD REC (µg/L) (62057)	
NOV 28...	<10	<.08	<1	<2.0	E.01	<.3	<1	3	--	--	--	--	--	
28...	23	.34	2	30.3	<.01	<.3	169	371	--	--	--	--	--	
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--	
08...	--	--	--	--	--	--	--	--	--	--	--	--	--	
FEB 12...	--	--	--	--	--	--	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAR 12...	--	--	--	--	--	--	--	--	--	--	--	--	--	
12...	--	--	--	--	--	--	--	--	--	--	--	--	--	
APR 16...	--	--	--	--	--	--	--	--	--	--	--	--	--	
16...	--	--	--	--	--	--	--	--	--	--	--	--	--	
MAY 22...	<10	<.08	<1	<2.0	<.01	<.3	<1	2	--	--	--	--	--	
22...	57	.84	15	28.0	E.01	.4	196	387	<.5	<.5	<.5	<.5	<2	
JUN 18...	--	--	--	--	--	--	--	--	--	--	--	--	--	
18...	--	--	--	--	--	--	--	--	<.5	<.5	<.5	<.5	<2	
JUL 23...	<10	<.08	<1	<2.0	<.01	<.3	<1	<1	--	--	--	--	--	
23...	E7	1.82	66	42.6	.03	<.3	270	700	<.5	<.5	<.5	<.5	<2	
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--	

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07186480 CENTER CREEK NEAR SMITHFIELD, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TRIBUTL PHOS- PHATE, WATER, FLTERD REC (µg/L) (62089)	TRICLO- SAN, WATER, FLTERD REC (µg/L) (62090)	TRI- ETHYL CITRATE WATER, FLTERD REC (µg/L) (62091)	TRIPHNL PHOS- PHATE, WATER, FLTERD REC (µg/L) (62092)	TRIS(2- BUTOXE- PHOS- PHATE, WATER, FLTERD (µg/L) (62093)
NOV					
28...	--	--	--	--	--
28...	--	--	--	--	--
JAN					
08...	--	--	--	--	--
08...	--	--	--	--	--
FEB					
12...	--	--	--	--	--
12...	--	--	--	--	--
MAR					
12...	--	--	--	--	--
12...	--	--	--	--	--
APR					
16...	--	--	--	--	--
16...	--	--	--	--	--
MAY					
22...	--	--	--	--	--
22...	<.5	<1	<.5	<.5	<.5
JUN					
18...	--	--	--	--	--
18...	<.5	<1	<.5	<.5	<.5
JUL					
23...	--	--	--	--	--
23...	<.5	<1	<.5	E.1	<.5
SEP					
10...	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

LA--Laboratory accident.

## ARKANSAS RIVER BASIN

07186600 TURKEY CREEK NEAR JOPLIN, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 37°07'15", long 94°34'55", in SE ¼ NE ¼ SE ¼ sec.25, T.28 N., R.34 W., Jasper County, Hydrologic Unit 11070207, approximately 3.0 mi northwest of Joplin on County Highway P, 2.5 mi upstream from the mouth of Turkey Creek.

DRAINAGE AREA.--41.8 mi<sup>2</sup>.

PERIOD OF RECORD.--August 1963 to September 1977, November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent satur-ation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)
NOV 27...	1500	ENVIRONMENTAL	23	11.0	104	7.6	619	11.6	260	93.6	5.80	6.79
JAN 08...	1025	ENVIRONMENTAL	22	11.5	96	7.5	618	6.1	--	--	--	--
FEB 11...	1530	ENVIRONMENTAL	49	12.3	109	7.2	535	9.0	--	--	--	--
MAR 12...	1510	ENVIRONMENTAL	48	11.6	113	8.0	563	12.4	--	--	--	--
APR 17...	0835	ENVIRONMENTAL	27	6.6	72	7.8	594	17.6	--	--	--	--
MAY 21...	1515	ENVIRONMENTAL	116	8.3	90	7.9	465	18.2	210	75.4	4.36	2.54
JUN 18...	1435	ENVIRONMENTAL	92	7.1	83	7.6	475	21.2	--	--	--	--
JUL 24...	0910	ENVIRONMENTAL	42	5.7	69	7.7	486	23.6	210	75.3	4.42	5.38
SEP 10...	1315	ENVIRONMENTAL	11	9.3	119	7.9	689	26.0	--	--	--	--

DATE	SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 27...	24.7	145	146	178	0	34.5	.2	93.8	<10	402	<.04	.60	5.45
JAN 08...	--	163	163	199	0	--	--	--	<10	--	E.03	.41	3.21
FEB 11...	--	136	138	168	0	--	--	--	<10	--	E.08	.55	E3.46
MAR 12...	--	145	144	176	0	--	--	--	<10	--	<.04	.44	3.15
APR 17...	--	150	150	183	0	--	--	--	<10	--	<.04	.56	3.31
MAY 21...	10.4	133	135	164	0	12.8	E.1	64.9	<10	281	<.04	.37	1.17
JUN 18...	--	141	143	175	0	--	--	--	<10	--	<.04	.89	1.99
JUL 24...	15.1	136	135	165	0	19.1	.2	66.0	<10	305	<.04	1.2	1.90
SEP 10...	--	143	142	173	0	--	--	--	<10	--	<.04	3.7	9.70

DATE	NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER, DIS-SOLVED (µg/L as Cu) (01040)
NOV 27...	.032	.87	.83	.96	K27	K183	K35	6	13	.6	1.72	1.9	<6
JAN 08...	<.008	.62	.57	.62	K27	110	54	--	--	--	--	--	--
FEB 11...	E.017	.54	E.51	.55	K11	105	46	--	--	--	--	--	--
MAR 12...	<.008	.47	.47	.51	K15	K8	K8	--	--	--	--	--	--
APR 17...	.009	.81	.74	.83	67	190	41	--	--	--	--	--	--
MAY 21...	.006	.14	.11	.16	K20	216	115	10	41	<.2	3.10	3.4	<5
JUN 18...	<.008	.26	.23	.26	140	K800	80	--	--	--	--	--	--
JUL 24...	E.004	.34	.33	.35	100	K480	760	4	34	.6	2.52	2.8	<6
SEP 10...	.009	1.52	1.40	1.54	53	240	83	--	--	--	--	--	--

## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## ARKANSAS RIVER BASIN

07186600 TURKEY CREEK NEAR JOPLIN, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	HHH MCP- BENZO- PYRAN, WATER, FLTRD REC (µg/L) (62075)	INDOLE, WATER, FLTRD REC (µg/L) (62076)	ISOBOR- NEOL, WATER, FLTRD REC (µg/L) (62077)	ISO- PHORONE DISSOLV REC (µg/L) (34409)	ISO- PROPYL BENZENE WATER, FLTRD REC (µg/L) (62078)	ISO- QUIN- OLINE, WATER, FLTRD REC (µg/L) (62079)	MENTHOL WATER, FLTRD REC (µg/L) (62080)	METAL- AXYL WATER FLTRD REC (µg/L) (50359)	METHYL SALICY- LATE, WATER, FLTRD REC (µg/L) (62081)	METO- LACHLOR WATER DISSOLV REC (µg/L) (39415)	DEET, WATER, FLTRD REC (µg/L) (62082)	NAPHTH- ALENE DISSOLV REC (µg/L) (34443)	NONYL- PHENOL, DIETHOX WATER, FLTRD REC (µg/L) (62083)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	M	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	E.1	<.5	<5
JUN 18...	M	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	<.5	E.1	<.5	<5
JUL 24...	M	<.5	<.5	<.5	<.5	<.5	<.5	<.5	E.1	<.5	E.1	<.5	<5
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	DI- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61705)	MONO- ETHOXY- OCTYL- PHENOL WAT FLT REC (µg/L) (61706)	PARA- CRESOL, WATER, FLTRD REC (µg/L) (62084)	PARA- NONYL- PHENOL, WATER, FLTRD REC (µg/L) (62085)	PENTA- CHLORO- PHENOL DISSOLV REC (µg/L) (34459)	PHENAN- THRENE DISSOLV REC (µg/L) (34462)	PHENOL WATER FILTRD REC (µg/L) (34466)	PRO- METON, WATER, DISS, REC (µg/L) (04037)	PYRENE DISSOLV REC (µg/L) (34470)	STIGMA- STANOL, WATER, FLTRD REC (µg/L) (62086)	TETRA- CHLORO- ETHY- LENE DISSOLV REC (µg/L) (34476)	FYROL CEF, WATER, FLTRD REC (µg/L) (62087)	FYROL PCF, WATER, FLTRD REC (µg/L) (62088)
NOV 27...	--	--	--	--	--	--	--	--	--	--	--	--	--
JAN 08...	--	--	--	--	--	--	--	--	--	--	--	--	--
FEB 11...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAR 12...	--	--	--	--	--	--	--	--	--	--	--	--	--
APR 17...	--	--	--	--	--	--	--	--	--	--	--	--	--
MAY 21...	<1	<1	<1	<5	<2	<.5	E.2	<.5	<.5	<2	<.5	M	M
JUN 18...	<1	<1	<1	<5	<2	<.5	.7	<.5	<.5	<2	<.5	M	M
JUL 24...	<1	<1	<1	<5	M	<.5	1.2	<.5	<.5	M	<.5	E.1	E.1
SEP 10...	--	--	--	--	--	--	--	--	--	--	--	--	--

DATE	TRIBUTL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62089)	TRICLO- SAN, WATER, FLTRD REC (µg/L) (62090)	TRI- ETHYL CITRATE WATER, FLTRD REC (µg/L) (62091)	TRIPHNL PHOS- PHATE, WATER, FLTRD REC (µg/L) (62092)	TRIS(2- BUTOXE- PHOS- PHATE, WATER, FLTRD REC (µg/L) (62093)
NOV 27...	--	--	--	--	--
JAN 08...	--	--	--	--	--
FEB 11...	--	--	--	--	--
MAR 12...	--	--	--	--	--
APR 17...	--	--	--	--	--
MAY 21...	<.5	<1	<.5	M	E.1
JUN 18...	<.5	<1	M	<.5	E.8
JUL 24...	E.1	<1	<.5	E.1	E.1
SEP 10...	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).  
E--Laboratory estimated value.  
M--Presence of material verified, but not quantified.  
<--Numeric result is less than the value shown.



07186690 SHOAL CREEK AT PIONEER, MO

LOCATION.--Lat 36°49'45", long 94°02'57" in NW  $\frac{1}{4}$  NE  $\frac{1}{4}$  NW  $\frac{1}{4}$  sec.3, T.24 N., R.29 W., Barry County, Hydrologic Unit 11070207, on right bank on private property, 0.25 mi downstream from Highway 97 bridge.

DRAINAGE AREA.--68.3 mi<sup>2</sup>.

PERIOD OF RECORD.--October 2001 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records poor. U.S.G.S. satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	22	19	44	40	153	41	69	50	153	106	47	34
2	23	31	43	38	118	61	65	45	149	104	66	32
3	24	25	41	37	107	59	61	44	144	94	56	31
4	23	20	34	36	93	61	59	44	139	107	37	32
5	45	18	31	37	86	66	59	44	139	77	43	35
6	27	17	29	36	84	69	58	363	133	72	40	39
7	22	17	27	32	73	66	63	142	129	77	39	37
8	20	16	25	33	69	64	101	2040	128	76	40	32
9	22	17	23	36	64	62	92	730	131	76	41	35
10	45	17	22	33	55	56	86	457	141	107	39	34
11	55	16	22	30	51	57	85	221	136	96	42	33
12	44	15	33	31	50	54	80	264	140	87	64	31
13	30	15	32	32	47	53	78	500	225	78	72	32
14	22	16	34	29	46	51	78	228	217	65	77	33
15	18	16	33	26	45	47	71	194	153	58	50	33
16	18	16	114	27	43	46	67	177	141	55	44	30
17	17	16	236	25	42	45	66	1630	130	57	44	30
18	17	39	187	26	42	45	64	733	120	57	54	36
19	17	89	145	27	49	59	63	618	113	59	56	33
20	17	57	123	26	45	68	62	376	106	56	48	29
21	17	48	112	25	42	67	60	228	100	51	43	28
22	16	37	99	26	40	66	57	209	94	50	39	26
23	17	37	83	31	41	68	57	195	90	49	39	26
24	16	97	74	34	41	68	55	199	109	44	36	25
25	20	52	69	30	39	98	49	180	134	44	38	25
26	19	45	65	30	37	85	53	171	124	53	38	25
27	19	32	63	29	37	84	54	166	109	57	36	25
28	18	31	60	31	38	80	53	173	90	51	32	26
29	17	32	51	32	---	77	50	182	92	43	31	28
30	17	40	46	53	---	73	51	166	101	42	32	24
31	18	---	44	162	---	71	---	158	---	40	35	---
MEAN	23.3	31.4	65.9	36.1	59.9	63.4	65.5	352	130	67.4	45.1	30.6
MAX	55	97	236	162	153	98	101	2040	225	107	77	39
MIN	16	15	22	25	37	41	49	44	90	40	31	24

## SUMMARY STATISTICS

## FOR 2002 WATER YEAR

ANNUAL MEAN	81.3	
HIGHEST DAILY MEAN	2040	May 8
LOWEST DAILY MEAN	15	Nov 12,13
ANNUAL SEVEN-DAY MINIMUM	16	Nov 11
MAXIMUM PEAK FLOW	6100 <sup>a</sup>	May 8
MAXIMUM PEAK STAGE	10.14	May 8
INSTANTANEOUS LOW FLOW	15	Sep 16
10 PERCENT EXCEEDS	143	
50 PERCENT EXCEEDS	48	
90 PERCENT EXCEEDS	22	

<sup>a</sup> Discharge determined by indirect measurement.

## ARKANSAS RIVER BASIN

07187000 SHOAL CREEK ABOVE JOPLIN, MO

LOCATION.--Lat 37°01'23", long 94°30'58", in SE ¼ NE ¼ NE ¼ sec.34, T.27 N., R.33 W., Newton County, Hydrologic Unit 11070207, on right bank 250 ft upstream from mouth of Spring Creek, 1,400 ft downstream from bridge on State Highway 86, 0.5 mi south of city limits of Joplin, and 13.2 mi above mouth.

DRAINAGE AREA.--427 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1941 to current year.

REVISED RECORDS.--WSP 1117: Drainage area.

GAGE.--Water-stage recorder and crest-stage gage. Datum of gage is 886.87 ft above National Geodetic Vertical Datum of 1929. Prior to July 21, 1966, water-stage recorder at site 1.8 mi upstream, at datum 15.5 ft higher; Apr. 21, 1924, to Nov. 6, 1941, records were collected at site about 3 mi downstream, datum unknown.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	61	79	117	225	1090	248	392	318	1020	425	233	146
2	60	228	118	214	976	297	378	307	948	417	226	151
3	58	214	116	203	845	327	362	291	883	427	224	143
4	58	178	112	196	744	342	341	279	832	409	221	144
5	157	153	110	192	664	364	326	268	809	404	209	178
6	169	134	107	187	607	399	317	295	781	383	204	146
7	134	122	103	179	560	435	317	654	730	364	228	139
8	105	115	98	170	514	449	347	2240	691	348	210	133
9	103	109	95	166	479	452	400	5140	687	335	201	129
10	1370	104	91	163	448	421	390	2620	650	347	220	126
11	499	99	87	156	412	401	378	1680	618	380	231	124
12	376	94	111	152	389	392	371	1730	862	438	201	122
13	315	88	130	148	371	380	364	3740	e2400	398	195	123
14	253	85	145	143	348	366	369	2500	1620	423	205	125
15	209	86	149	138	335	355	357	1630	1180	350	202	123
16	178	84	184	135	319	336	343	1360	962	330	192	128
17	160	82	457	133	304	322	344	3090	857	322	246	130
18	146	84	750	129	291	308	326	7700	787	320	247	125
19	133	103	681	130	300	320	323	3200	729	311	206	181
20	124	125	589	127	318	349	366	2000	675	306	191	199
21	117	142	521	123	301	374	366	1640	632	294	177	152
22	108	126	470	120	287	377	350	1400	597	284	170	134
23	104	118	425	122	281	377	341	1240	566	302	166	125
24	101	113	385	130	274	379	335	1600	538	284	170	120
25	97	133	354	126	264	422	317	1750	519	270	172	117
26	91	144	327	122	253	465	330	1310	577	262	165	115
27	88	127	307	120	245	458	345	1170	511	251	156	112
28	86	121	291	116	239	458	345	1100	481	241	153	112
29	84	119	273	115	---	453	330	1760	458	242	150	110
30	82	120	254	196	---	438	319	1310	442	245	149	106
31	80	---	239	982	---	415	---	1130	---	241	149	---
MEAN	184	121	264	179	445	383	350	1821	801	334	196	134
MAX	1370	228	750	982	1090	465	400	7700	2400	438	247	199
MIN	58	79	87	115	239	248	317	268	442	241	149	106
IN.	0.50	0.32	0.71	0.48	1.09	1.03	0.91	4.92	2.09	0.90	0.53	0.35

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1942 - 2002, BY WATER YEAR (WY)

	MEAN	291	402	357	327	392	562	650	721	578	350	215	250
MAX	1709	2034	1993	1145	1233	1961	3281	4691	2470	2049	2337	1872	
(WY)	1960	1986	1993	1973	1968	1973	1945	1943	1995	1993	1950	1993	
MIN	48.3	55.4	57.3	54.9	61.7	57.9	56.0	121	81.4	47.0	37.1	47.0	
(WY)	1957	1964	1964	1964	1964	1954	1954	1963	1954	1954	1954	1953	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR	FOR 2002 WATER YEAR	WATER YEARS 1942 - 2002
ANNUAL MEAN	257	435	424
HIGHEST ANNUAL MEAN			1221
LOWEST ANNUAL MEAN			77.8
HIGHEST DAILY MEAN	6120	Feb 25	7700
LOWEST DAILY MEAN	58	Oct 3,4	58
ANNUAL SEVEN-DAY MINIMUM	71	Sep 28	84
MAXIMUM PEAK FLOW	---		9360
MAXIMUM PEAK STAGE	---		11.31
INSTANTANEOUS LOW FLOW	---		55
ANNUAL RUNOFF (INCHES)	8.16		13.84
10 PERCENT EXCEEDS	446		859
50 PERCENT EXCEEDS	175		281
90 PERCENT EXCEEDS	93		110

e Estimated

a Former site and datum.

07188653 BIG SUGAR CREEK NEAR POWELL, MO

LOCATION.--Lat 36°36'57", long 94°10'57", in NW ¼ NW ¼ NE ¼ sec. 36, T.22 N., R.33 W., McDonald County, Hydrologic Unit 11070208, on left bank of county road, 1.0 mi west of Powell.

DRAINAGE AREA.--141 mi<sup>2</sup>.

PERIOD OF RECORD.--May 25, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	8.8	28	190	79	781	89	133	100	235	58	30	14
2	8.8	40	156	74	426	231	127	97	205	60	28	13
3	8.7	98	123	70	299	289	118	93	183	62	32	12
4	9.0	79	102	66	226	239	110	88	168	88	28	12
5	20	66	88	63	183	218	106	82	219	77	25	12
6	25	57	77	60	162	218	101	92	214	65	24	11
7	19	50	69	57	147	207	108	85	181	57	24	11
8	16	46	62	54	141	188	1200	924	161	52	21	10
9	18	43	56	52	136	172	666	1070	149	48	20	10
10	31	39	52	51	130	151	421	638	143	46	20	9.8
11	105	36	48	49	122	143	314	379	135	48	22	9.6
12	212	33	58	47	116	137	254	280	243	48	20	9.5
13	123	30	77	45	110	129	259	596	775	70	21	9.4
14	92	29	86	44	106	123	219	416	409	65	32	9.6
15	74	27	93	42	101	115	185	292	285	55	30	9.9
16	62	25	819	40	97	109	161	231	225	50	24	11
17	55	24	1820	39	92	103	158	5420	188	45	23	11
18	49	24	756	38	88	99	147	1450	164	44	25	10
19	45	34	441	38	98	199	138	669	145	122	22	12
20	42	50	298	36	118	530	132	454	130	83	20	12
21	38	45	226	35	117	392	124	374	117	68	19	10
22	36	41	184	34	112	287	116	311	106	58	19	9.3
23	39	45	155	37	110	232	119	267	97	58	18	8.7
24	60	147	138	92	107	199	121	275	89	51	19	8.2
25	52	117	126	91	104	263	113	252	83	45	19	7.7
26	45	85	116	84	97	252	114	218	78	42	18	7.2
27	40	67	109	79	92	217	114	204	73	39	16	7.1
28	37	62	102	74	88	193	111	373	69	36	15	7.3
29	35	66	96	70	---	174	107	531	64	39	14	7.3
30	32	133	89	85	---	155	104	370	61	36	14	7.3
31	30	---	83	750	---	143	---	285	---	32	13	---
MEAN	47.3	55.5	222	79.8	161	200	207	546	180	56.4	21.8	9.96
MAX	212	147	1820	750	781	530	1200	5420	775	122	32	14
MIN	8.7	24	48	34	88	89	101	82	61	32	13	7.1

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	30.4	54.4	138	92.5	281	155	122	294	264	74.0	23.9	10.1
MAX	47.3	55.5	222	105	401	200	207	546	558	138	40.5	10.8
(WY)	2002	2002	2002	2001	2001	2002	2002	2002	2000	2000	2000	2001
MIN	13.5	53.2	53.8	79.8	161	109	37.8	42.8	53.3	27.2	9.52	9.66
(WY)	2001	2001	2001	2002	2002	2001	2001	2001	2001	2001	2001	2000

SUMMARY STATISTICS

FOR 2001 CALENDAR YEAR

FOR 2002 WATER YEAR

WATER YEARS 2000 - 2002

ANNUAL MEAN	91.6	149	112
HIGHEST ANNUAL MEAN			149
LOWEST ANNUAL MEAN			74.2
HIGHEST DAILY MEAN	3570	Feb 24	6020
LOWEST DAILY MEAN	5.7	Sep 7	5.1
ANNUAL SEVEN-DAY MINIMUM	6.8	Sep 1	5.6
MAXIMUM PEAK FLOW	---		11000
MAXIMUM PEAK STAGE	---		15.70
INSTANTANEOUS LOW FLOW	---		7.1
10 PERCENT EXCEEDS	157		285
50 PERCENT EXCEEDS	45		83
90 PERCENT EXCEEDS	9.9		14

## 07188885 INDIAN CREEK NEAR LANAGAN, MO

LOCATION.--Lat 36°35'57", long 94°26'58", in NW ¼ NW ¼ NE ¼ sec. 36, T. 22 N., R.33 W., McDonald County, Hydrologic Unit 11070208, on downstream side of Highway EE bridge, 0.5 mi southeast of Lanagan.

DRAINAGE AREA.--239 mi<sup>2</sup>.

PERIOD OF RECORD.--May 24, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	28	37	61	101	581	112	219	148	462	176	74	51
2	28	44	60	95	484	149	206	141	429	177	72	50
3	27	52	60	91	409	197	191	133	402	180	72	50
4	27	49	60	88	347	219	178	127	378	180	68	49
5	41	46	58	86	300	226	168	120	371	174	66	49
6	51	44	55	85	267	244	159	1480	350	161	64	49
7	45	42	52	82	238	268	162	993	327	150	63	47
8	41	40	51	79	215	270	259	5730	310	142	62	47
9	39	41	48	77	197	259	306	2260	296	136	60	46
10	62	40	46	76	182	233	299	1430	291	130	60	46
11	111	38	45	73	166	217	284	985	283	132	60	46
12	138	37	58	71	156	208	266	828	359	136	58	45
13	116	37	73	70	147	197	245	2390	633	148	60	45
14	93	36	88	69	137	187	228	1300	647	139	66	48
15	76	36	98	67	131	178	214	945	525	128	63	49
16	64	36	168	66	125	166	201	772	451	120	59	50
17	57	35	536	65	119	155	192	3790	397	115	59	51
18	52	37	618	63	114	149	180	3230	357	112	63	50
19	49	61	485	63	122	170	171	1270	326	108	60	53
20	46	95	387	62	135	241	173	1010	300	105	57	55
21	45	91	321	62	138	279	163	880	279	99	55	51
22	43	81	273	60	135	275	155	800	262	99	53	48
23	43	74	235	62	132	259	157	716	247	109	53	46
24	43	77	205	65	130	247	156	758	236	99	59	45
25	40	76	182	61	125	294	148	733	228	93	61	43
26	39	71	164	59	119	321	151	632	285	88	57	43
27	38	66	150	58	113	316	158	577	232	84	54	42
28	37	63	139	58	108	299	162	547	211	81	52	42
29	37	61	128	58	---	281	158	638	196	83	52	42
30	36	61	117	80	---	259	152	545	185	83	51	39
31	36	---	108	336	---	237	---	498	---	79	51	---
MEAN	52.5	53.5	166	80.3	199	229	195	1174	342	124	60.1	47.2
MAX	138	95	618	336	581	321	306	5730	647	180	74	55
MIN	27	35	45	58	108	112	148	120	185	79	51	39

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	49.8	63.3	110	115	439	244	148	621	350	138	53.2	40.9
MAX	52.5	73.1	165	150	679	259	195	1174	519	215	64.0	47.2
(WY)	2002	2001	2002	2001	2001	2001	2002	2002	2000	2000	2000	2002
MIN	47.2	53.5	55.2	80.3	199	229	99.8	67.2	190	75.6	35.5	32.7
(WY)	2001	2002	2001	2002	2002	2002	2001	2001	2001	2001	2001	2001

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR			FOR 2002 WATER YEAR			WATER YEARS 2000 - 2002		
ANNUAL MEAN	151			228			186		
HIGHEST ANNUAL MEAN							228		
LOWEST ANNUAL MEAN							143		
HIGHEST DAILY MEAN	5800			Feb 24			5800		
LOWEST DAILY MEAN	27			Oct 3,4			27		
ANNUAL SEVEN-DAY MINIMUM	28			Sep 28			28		
MAXIMUM PEAK FLOW	---			Unknown			Unknown		
MAXIMUM PEAK STAGE	---			10.73			10.80		
INSTANTANEOUS LOW FLOW	---			27			27		
10 PERCENT EXCEEDS	275			438			326		
50 PERCENT EXCEEDS	76			113			81		
90 PERCENT EXCEEDS	34			44			38		

## WHITE RIVER BASIN

519

07188950 PATTERSON CREEK NEAR TIFF CITY, MO  
(Ambient Water-Quality Monitoring Network)

LOCATION.--Lat 36°39'45", long 94°31'54", in SW ¼ SE ¼ SE ¼ sec.6, T.22 N., R.33 W., McDonald County, Hydrologic Unit 11070208, 6.0 mi east of Tiff City, approximately 2.7 mi south of State Highway 43 on County Road 7628.

DRAINAGE AREA.--9.73 mi<sup>2</sup>.

PERIOD OF RECORD.--November 1999 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

			DIS-CHARGE, INST. (cubic feet per second) (00061)	OXYGEN, DIS-SOLVED (mg/L) (00300)	OXYGEN, (per-cent saturation) (00301)	pH WATER WHOLE FIELD (stand-ard units) (00400)	SPE-CIFIC CON-DUCT-ANCE (µS/cm) (00095)	TEMPER-ATURE WATER (deg C) (00010)	HARD-NESS TOTAL (mg/L as CaCO <sub>3</sub> ) (00900)	CALCIUM DIS-SOLVED (mg/L as Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (mg/L as Mg) (00925)	POTAS-SIUM, DIS-SOLVED (mg/L as K) (00935)		
DATE	TIME	SAMPLE TYPE												
NOV 27...	1020	ENVIRONMENTAL	1.8	9.8	89	7.6	329	10.0	160	61.0	1.76	.98		
NOV 27...	1021	REPLICATE	--	--	--	--	--	--	160	62.0	1.78	1.40		
JAN 07...	1415	ENVIRONMENTAL	2.8	11.4	102	7.8	313	9.2	--	--	--	--		
MAR 12...	1025	ENVIRONMENTAL	5.4	10.7	101	7.0	292	11.2	--	--	--	--		
MAY 21...	1215	ENVIRONMENTAL	29	9.4	98	7.6	241	16.0	82	30.4	1.41	.25		
JUL 23...	1130	ENVIRONMENTAL	4.7	8.5	96	7.8	312	20.0	--	--	--	--		
SEP 10...	1110	ENVIRONMENTAL	2.1	8.3	92	7.8	332	18.8	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AM-MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
NOV 27...	6.19	137	140	171	0	9.20	<.1	4.2	<10	198	<.04	E.09	3.09	
NOV 27...	5.80	--	--	--	--	8.91	E.1	4.1	<10	206	<.04	E.08	3.12	
JAN 07...	--	127	130	159	0	--	--	--	<10	--	<.04	E.09	4.03	
MAR 12...	--	98	98	120	0	--	--	--	<10	--	<.04	E.09	4.38	
MAY 21...	4.67	91	90	110	0	5.67	<.1	5.3	<10	147	<.04	E.10	3.92	
JUL 23...	--	132	133	162	0	--	--	--	<10	--	<.04	.11	3.40	
SEP 10...	--	135	135	164	0	--	--	--	<10	--	<.04	E.06	3.56	
DATE		NITRO-GEN, NITRITE DIS-SOLVED (mg/L as N) (00613)	PHOS-PHORUS DIS-SOLVED (mg/L as P) (00666)	PHOS-PHORUS ORTHO, DIS-SOLVED (mg/L as P) (00671)	PHOS-PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./100 mL) (31633)	COLI-FORM, FECAL, 0.7 µm-MF (col./100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./100 mL) (31673)	ALUM-INUM, DIS-SOLVED (µg/L as Al) (01106)	ALUM-INUM, TOTAL RECOV-ERABLE (µg/L as Al) (01105)	ARSENIC DIS-SOLVED (µg/L as As) (01000)	CADMIUM DIS-SOLVED (µg/L as Cd) (01025)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	COPPER DIS-SOLVED (µg/L as Cu) (01040)
NOV 27...	.029	<.06	<.02	<.06	K15	35	140	9	20	E.1	<.04	<.1	<6	
NOV 27...	.030	<.06	<.02	.10	--	--	--	9	18	.2	<.04	<.1	<6	
JAN 07...	E.004	<.06	E.01	<.06	<1	K11	K13	--	--	--	--	--	--	
MAR 12...	<.008	<.06	E.01	<.06	K13	24	K9	--	--	--	--	--	--	
MAY 21...	E.004	E.04	.03	E.03	K28	78	142	29	51	<.2	<.04	<.1	<6	
JUL 23...	E.006	<.06	E.02	<.06	K120	210	435	--	--	--	--	--	--	
SEP 10...	E.005	<.06	E.01	<.06	K15	K14	335	--	--	--	--	--	--	

## WHITE RIVER BASIN

07188950 PATTERSON CREEK NEAR TIFF CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	IRON, DIS- SOLVED (µg/L as Fe) (01046)	LEAD, DIS- SOLVED (µg/L as Pb) (01049)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	MANGA- NESE, DIS- SOLVED (µg/L as Mn) (01056)	MERCURY TOTAL RECOV- ERABLE (µg/L as Hg) (71900)	SELE- NIUM, DIS- SOLVED (µg/L as Se) (01145)	ZINC, DIS- SOLVED (µg/L as Zn) (01090)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
NOV								
27...	11	<.08	M	3.9	E.01	<.3	--	10
27...	11	<.08	<1	3.9	E.01	<.3	--	18
JAN								
07...	--	--	--	--	--	--	--	--
MAR								
12...	--	--	--	--	--	--	--	--
MAY								
21...	23	E.05	<1	6.6	<.01	<.3	--	4
JUL								
23...	--	--	--	--	--	--	--	--
SEP								
10...	--	--	--	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

07189000 ELK RIVER NEAR TIFF CITY, MO

LOCATION.--Lat 36°37'53", long 94°35'12", in NE ¼ NE ¼ sec.22, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, near right abutment of bridge on State Highway 43, 0.8 mi downstream from Blackfoot Branch, 2.8 mi upstream from Buffalo Creek, 3.0 mi southeast of Tiff City, and at mile 15.8.

DRAINAGE AREA.--872 mi<sup>2</sup>.

PERIOD OF RECORD.--October 1939 to current year.

REVISED RECORDS.--WSP 927: 1940. WSP 1117: Drainage area.

GAGE.--Water stage recorder. Datum of gage is 750.61 ft above National Geodetic Vertical Datum of 1929 (levels by U.S. Army Corps of Engineers). Sept. 6, 1960 to Aug. 25, 1961, at site 100 ft downstream.

REMARKS.--Records good. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE VIA SATELLITE, in CFS, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	117	235	431	492	4670	530	891	726	1370	408	240	124
2	116	242	522	465	3210	580	826	711	1230	391	227	122
3	112	256	503	442	2160	860	773	684	1110	407	215	119
4	112	282	441	422	1640	1080	721	661	1020	439	207	116
5	162	326	405	407	1320	1080	679	633	990	509	198	112
6	200	324	376	399	1130	1130	647	1620	999	512	194	108
7	236	311	352	388	993	1210	640	2410	950	436	189	103
8	226	301	333	377	895	1190	2110	6680	880	385	184	102
9	218	296	316	366	832	1110	4900	8400	819	356	177	101
10	245	288	301	358	780	1000	2950	6520	787	342	170	95
11	390	282	290	347	734	910	2140	3530	760	332	169	94
12	780	269	304	338	692	856	1710	2600	765	331	168	93
13	788	262	329	331	661	811	1440	6410	1580	338	178	90
14	631	255	381	322	630	769	1310	5230	2740	329	198	91
15	518	248	424	317	601	734	1170	3310	1670	322	223	93
16	442	246	606	309	575	697	1060	2530	1240	311	220	99
17	393	240	6540	303	551	661	977	8980	1030	298	206	105
18	361	238	6030	299	528	633	921	20600	914	326	198	102
19	334	271	3310	295	532	673	863	6210	829	553	188	121
20	314	323	2170	292	587	1440	832	3740	756	525	177	121
21	299	348	1610	287	645	2260	791	2810	698	441	167	117
22	286	336	1300	284	650	1820	754	2250	646	365	160	108
23	277	324	1070	283	639	1490	749	1880	604	402	151	102
24	274	330	912	299	627	1280	765	1740	561	361	148	97
25	272	472	816	363	611	1390	751	1780	533	325	159	91
26	274	512	741	387	588	1670	742	1540	575	312	159	85
27	267	437	687	372	565	1530	766	1370	552	296	153	81
28	258	398	640	360	540	1350	774	1340	492	285	145	79
29	248	377	597	355	---	1210	760	1920	458	287	138	74
30	242	378	557	386	---	1080	737	1970	431	294	134	73
31	238	---	522	1280	---	974	---	1580	---	274	127	---
MEAN	311	314	1091	385	1021	1097	1172	3625	933	371	180	101
MAX	788	512	6540	1280	4670	2260	4900	20600	2740	553	240	124
MIN	112	235	290	283	528	530	640	633	431	274	127	73
IN.	0.41	0.40	1.44	0.51	1.22	1.45	1.50	4.79	1.19	0.49	0.24	0.13

STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 1940 - 2002, BY WATER YEAR (WY)

	MEAN	418	722	773	687	897	1339	1588	1526	986	488	260	292
MAX	2938	4094	3651	2509	2971	5020	6119	8964	4245	2565	2418	2164	
(WY)	1942	1975	1993	1985	1951	1945	1945	1943	1995	1976	1950	1993	
MIN	25.7	49.8	58.5	55.9	70.7	75.7	145	227	78.6	14.3	12.0	30.9	
(WY)	1957	1964	1964	1964	1954	1956	1956	1964	1954	1954	1954	1953	

SUMMARY STATISTICS	FOR 2001 CALENDAR YEAR		FOR 2002 WATER YEAR		WATER YEARS 1940 - 2002	
ANNUAL MEAN	619		885		830	
HIGHEST ANNUAL MEAN					1881	
LOWEST ANNUAL MEAN					135	
HIGHEST DAILY MEAN	19800		20600		68600	
LOWEST DAILY MEAN	79		73		5.1	
ANNUAL SEVEN-DAY MINIMUM	83		83		5.6	
MAXIMUM PEAK FLOW	---		33100		137000	
MAXIMUM PEAK STAGE	---		20.57		28.40	
ANNUAL RUNOFF (INCHES)	9.64		13.78		12.93	
10 PERCENT EXCEEDS	1130		1690		1750	
50 PERCENT EXCEEDS	329		441		343	
90 PERCENT EXCEEDS	117		136		88	

## WHITE RIVER BASIN

07189000 ELK RIVER NEAR TIFF CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY RECORDS

PERIOD OF RECORD.--August 1962 to June 1963, November 1965 to July 1975, October 1980 to September 1981, October 1982 to June 1990, November 1992 to current year.

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TIME	SAMPLE TYPE	DIS-CHARGE, INST.	OXYGEN,	OXYGEN,	pH	SPE-CIFIC	TEMPER-ATURE WATER	HARD-NESS	CALCIUM	MAGNE-SIUM,	POTAS-SIUM,		
			(cubic feet per second)	(mg/L)	(per-cent saturation)	DUCT-ANCE	TOTAL		DIS-SOLVED	DIS-SOLVED	DIS-SOLVED			
OCT 24...	1210	ENVIRONMENTAL	274	8.4	95	8.0	317	19.1	--	--	--	--		
NOV 27...	0835	ENVIRONMENTAL	437	9.4	86	7.7	317	10.6	150	55.2	3.71	1.87		
DEC 11...	0900	ENVIRONMENTAL	290	10.9	92	7.7	318	6.9	--	--	--	--		
JAN 07...	1250	ENVIRONMENTAL	388	12.8	105	7.5	315	5.8	160	57.2	3.31	1.71		
FEB 11...	1245	ENVIRONMENTAL	734	12.5	105	7.7	294	7.0	--	--	--	--		
FEB 11...	1246	REPLICATE	--	--	--	--	--	--	--	--	--	--		
MAR 12...	0845	ENVIRONMENTAL	856	11.3	108	8.1	284	12.1	--	--	--	--		
APR 16...	1100	ENVIRONMENTAL	1060	9.9	107	8.0	272	17.8	--	--	--	--		
MAY 21...	1010	ENVIRONMENTAL	2810	9.2	93	7.8	260	15.3	120	44.3	2.35	1.37		
JUN 18...	0915	ENVIRONMENTAL	914	7.9	92	7.9	293	21.2	--	--	--	--		
JUL 23...	0900	BLANK	--	--	--	--	--	--	--	.02	E.004	<.10		
JUL 23...	0945	ENVIRONMENTAL	402	6.0	76	7.8	304	26.2	140	52.2	2.98	2.58		
AUG 26...	1340	ENVIRONMENTAL	159	9.2	121	8.0	307	27.9	--	--	--	--		
SEP 10...	1000	ENVIRONMENTAL	95	6.1	75	7.9	318	24.6	--	--	--	--		
DATE		SODIUM, DIS-SOLVED (mg/L as Na) (00930)	ANC WATER UNFLTRD FET FIELD (mg/L as CaCO <sub>3</sub> ) (00410)	ANC WATER UNFLTRD IT FIELD (mg/L as CaCO <sub>3</sub> ) (00419)	ANC BICAR-BONATE IT FIELD (mg/L as HCO <sub>3</sub> ) (00450)	ANC CAR-BONATE IT FIELD (mg/L as CO <sub>3</sub> ) (00447)	CHLO-RIDE, DIS-SOLVED (mg/L as Cl) (00940)	FLUO-RIDE, DIS-SOLVED (mg/L as F) (00950)	SULFATE DIS-SOLVED (mg/L as SO <sub>4</sub> ) (00945)	RESIDUE TOTAL AT 105 DEG. C, SUS-PENDED (mg/L) (00530)	SOLIDS, RESIDUE AT 180 DEG. C, DIS-SOLVED (mg/L) (70300)	NITRO-GEN, AMMONIA DIS-SOLVED (mg/L as N) (00608)	NITRO-GEN, AMMONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO-GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS-SOLVED (mg/L as N) (00631)
OCT 24...	--	133	131	159	0	--	--	--	<10	--	E.03	.13	1.38	
NOV 27...	6.45	130	131	160	0	9.33	E.1	9.5	<10	186	<.04	E.10	1.70	
DEC 11...	--	136	136	166	0	--	--	--	<10	--	<.04	.16	1.89	
JAN 07...	5.06	135	136	166	0	9.03	E.1	8.2	<10	184	<.04	E.09	2.99	
FEB 11...	--	119	121	147	0	--	--	--	<10	--	<.04	E.07	E2.81	
FEB 11...	--	--	--	--	--	--	--	--	<10	--	<.04	E.07	E2.78	
MAR 12...	--	119	119	145	0	--	--	--	<10	--	<.04	.10	2.19	
APR 16...	--	122	122	149	0	--	--	--	<10	--	<.04	.11	1.80	
MAY 21...	3.41	104	104	127	0	4.97	<.1	6.0	18	155	<.04	.12	2.16	
JUN 18...	--	124	125	153	0	--	--	--	<10	--	<.04	.15	1.95	
JUL 23...	<.09	--	--	--	--	<.30	<.1	<.1	<10	<10	<.04	<.10	<.05	
JUL 23...	6.60	125	125	152	0	7.48	<.1	6.3	<10	176	<.04	.14	1.98	
AUG 26...	--	128	128	157	0	--	--	--	<10	--	<.04	.11	1.25	
SEP 10...	--	128	130	158	0	--	--	--	<10	--	<.04	.15	.67	



## WATER-QUALITY DATA. WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

07189000 ELK RIVER NEAR TIFF CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible][illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WHITE RIVER BASIN

07189000 ELK RIVER NEAR TIFF CITY, MO--Continued  
(Ambient Water-Quality Monitoring Network)

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	TRIBUTL PHOS- PHATE, WATER, FLTERD REC (µg/L) (62089)	TRICLO- SAN, WATER, FLTERD REC (µg/L) (62090)	TRI- ETHYL CITRATE WATER, FLTERD REC (µg/L) (62091)	TRIPHNL PHOS- PHATE, WATER, FLTERD REC (µg/L) (62092)	TRIS(2- BUTOXE- PHOS- PHATE, WATER, FLTERD (µg/L) (62093)
OCT					
24...	--	--	--	--	--
NOV					
27...	--	--	--	--	--
DEC					
11...	--	--	--	--	--
JAN					
07...	--	--	--	--	--
FEB					
11...	--	--	--	--	--
11...	--	--	--	--	--
MAR					
12...	--	--	--	--	--
APR					
16...	--	--	--	--	--
MAY					
21...	<.5	<1	<.5	<.5	<.5
JUN					
18...	<.5	<1	<.5	<.5	<.5
JUL					
23...	--	--	--	--	--
23...	<.5	<1	<.5	<.5	<.5
AUG					
26...	--	--	--	--	--
SEP					
10...	--	--	--	--	--

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

M--Presence of material verified, but not quantified.

<--Numeric result is less than the value shown.

## 07189100 BUFFALO CREEK AT TIFF CITY, MO

LOCATION.--Lat 36°40'15", long 94°36'14", in NW ¼ NE ¼ SE ¼ sec. 4, T.22 N., R.34 W., McDonald County, Hydrologic Unit 11070208, on downstream side of Highway 76 bridge, 0.5 mi east of Tiff City.

DRAINAGE AREA.--60.8 mi<sup>2</sup>.

PERIOD OF RECORD.--May 24, 2000 to current year.

GAGE.--Water-stage recorder. Datum of gage is unknown.

REMARKS.--Records fair except for discharges below 5 ft<sup>3</sup>/s, which are poor. U.S. Army Corps of Engineers satellite telemeter at station.

DISCHARGE, CUBIC FEET PER SECOND, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002  
DAILY MEAN VALUES

DAY	OCT	NOV	DEC	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP
1	3.6	7.0	16	26	610	35	65	83	98	20	5.3	0.48
2	3.2	9.5	15	23	384	38	60	74	87	20	4.5	0.63
3	2.8	11	14	21	296	41	54	66	77	20	4.7	0.62
4	2.8	9.8	13	19	218	50	50	59	68	21	4.8	0.43
5	11	17	12	18	170	56	47	53	65	24	4.1	0.25
6	15	20	11	17	134	72	44	778	58	20	5.5	0.29
7	34	17	9.9	16	106	101	46	561	51	20	4.9	0.26
8	35	15	9.6	16	84	108	66	1360	46	17	4.0	0.27
9	28	13	8.9	15	69	104	99	1210	43	17	3.4	0.28
10	32	12	8.0	14	58	88	109	780	40	17	3.1	0.23
11	39	10	7.9	13	50	79	112	472	36	18	3.0	0.29
12	68	10	12	13	45	73	105	528	62	19	3.0	0.21
13	81	9.4	14	13	40	66	95	1730	159	18	3.1	0.22
14	65	9.1	19	12	38	62	84	731	121	18	3.8	0.28
15	50	9.0	27	11	35	56	76	474	100	19	3.3	0.27
16	41	8.4	48	10	34	52	73	329	84	18	2.6	0.28
17	32	8.1	422	9.8	31	48	75	1270	73	17	2.5	0.17
18	26	9.1	327	9.6	30	46	72	900	62	16	2.1	0.11
19	22	66	225	9.5	32	48	68	553	53	14	1.6	1.9
20	18	133	165	9.2	35	53	92	391	44	12	1.4	3.5
21	16	87	127	8.9	38	67	116	286	38	11	1.3	2.3
22	14	63	104	8.7	42	72	105	220	37	10	1.1	1.3
23	13	50	85	9.7	41	71	101	177	33	11	1.1	0.83
24	11	40	72	10	41	70	95	243	33	10	1.4	0.54
25	10	33	61	10	41	81	85	258	30	8.9	1.6	0.42
26	9.4	28	52	11	40	103	85	186	30	7.7	1.4	0.59
27	9.2	23	46	11	37	102	85	153	29	6.4	1.8	0.74
28	8.4	21	42	11	35	95	94	137	26	5.9	1.1	0.86
29	7.9	18	37	14	---	88	95	136	23	6.2	0.70	0.70
30	7.3	17	32	90	---	80	89	126	21	6.9	0.55	0.54
31	7.4	---	29	1020	---	72	---	112	---	6.2	0.41	---
MEAN	23.3	26.1	66.8	48.4	100	70.2	81.4	466	57.6	14.7	2.68	0.66
MAX	81	133	422	1020	610	108	116	1730	159	24	5.5	3.5
MIN	2.8	7.0	7.9	8.7	30	35	44	53	21	5.9	0.41	0.11

## STATISTICS OF MONTHLY MEAN DATA FOR WATER YEARS 2000 - 2002, BY WATER YEAR (WY)

	2000	2001	2002	2000	2001	2002	2000	2001	2002	2000	2001	2002
MEAN	13.4	22.0	37.7	73.3	178	68.9	53.8	239	152	27.4	4.80	1.98
MAX	23.3	26.1	66.8	98.2	256	70.2	81.4	466	254	49.0	8.27	3.46
(WY)	2002	2002	2002	2001	2001	2002	2002	2002	2000	2000	2000	2001
MIN	3.38	17.8	8.57	48.4	100	67.5	26.3	12.2	57.6	14.7	2.68	0.66
(WY)	2001	2001	2001	2002	2002	2001	2001	2001	2002	2002	2002	2002

## SUMMARY STATISTICS

## FOR 2001 CALENDAR YEAR

## FOR 2002 WATER YEAR

## WATER YEARS 2000 - 2002

ANNUAL MEAN	60.6	80.1	66.7
HIGHEST ANNUAL MEAN			80.1
LOWEST ANNUAL MEAN			53.3
HIGHEST DAILY MEAN	2050	Feb 24	2390
LOWEST DAILY MEAN	1.7	Sep 7,8	0.11
ANNUAL SEVEN-DAY MINIMUM	1.9	Sep 2	0.22
MAXIMUM PEAK FLOW	---	2660	5500
MAXIMUM PEAK STAGE	---	7.67	10.23
INSTANTANEOUS LOW FLOW	---	0.09	0.09
10 PERCENT EXCEEDS	110	133	110
50 PERCENT EXCEEDS	20	28	19
90 PERCENT EXCEEDS	3.4	1.4	2.5



Figure 14. Location of partial-record stations.

## DISCHARGE AT PARTIAL-RECORD STATIONS

The following table contains annual maximum discharges for crest-stage partial-record stations. A crest-stage gage is a device which will register the peak stage occurring at the station between inspections of the gage. A stage-discharge relation for each gage is developed from discharge measurements made by indirect measurements of peak flow or by current meter. The date of the maximum discharge is not always certain but is usually determined by comparison with nearby continuous-record stations, weather records, or local inquiry. Only the maximum discharge for each water year is given. Information on some lower floods may have been obtained but is not published herein. The years given in the period of record represent water years for which the annual maximum has been determined.

Maximum discharge at crest-stage partial-record stations

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum		
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
Fabius River Basin								
05497485 Brushy Creek near Queen City, Mo.	Lat 40°24'01", long 92°25'31", in NE 1/4 sec.35, T.65 N., R.14 W., Hydrologic Unit 07110002, Schuyler County, on downstream side of bridge on State Highway E, about 7 miles east of Queen City. Drainage area 5.35 mi <sup>2</sup> , slope 23.1 ft/mi.	1997-	05-14-02	12.32	2,020 <sup>a</sup>	05-14-2002	12.32	2,020 <sup>a</sup>
			Record:					
			1997	<6.71	+			
			03-31-98	11.21	+			
			05-07-99	11.49	+			
			2000	<6.71	+			
			06-14-01	11.86				
05499200 Little Fabius River near Edina, Mo.	Lat 40°03'29", long 92°10'29", in SW 1/4 sec.30, T.61 N., R.11 W., Hydrologic Unit 07110003, Knox County, on downstream side of bridge on State Highway 15, about 7 miles south of Edina. Drainage area 23.8 mi <sup>2</sup> , slope 7.02 ft/mi.	1997-	05-14-02	18.17	4,660 <sup>a</sup>	05-14-2002	18.17	4,660 <sup>a</sup>
			Record:					
			05-28-97	16.47	2,530			
			04-01-98	17.45	3,630			
			10-07-98	16.22	2,290			
			06-26-00	9.86	339			
			06-05-01	16.17	2,250			
05499850 Troublesome Creek near Lewistown, Mo.	Lat 39°59'52", long 91°50'37", in SE 1/4 sec.13, T.60 N., R.9 W., Hydrologic Unit 07110003, Lewis County, on downstream side of bridge on State Highway 156, about 7 miles south of Lewistown. Drainage area 92.3 mi <sup>2</sup> , slope 4.57 ft/mi.	1997-	05-14-02	19.98	+	05-14-2002	19.98	+
			Record:					
			04-16-97	18.37	+			
			04-01-98	18.43	+			
			10-07-98	19.23	+			
			06-26-00	14.84	781			
			05-13-01	18.43	+			
Salt River Basin								
05506193 Mud Creek near Moberly, Mo.	Lat 39°34'34", long 92°20'59", at center sec.10, T.55 N., R.13 W., Hydrologic Unit 07110006, Randolph County, on downstream side of bridge on State Highway J, about 16 miles northeast of Moberly. Drainage area 24.0 mi <sup>2</sup> , slope 11.6 ft/mi.	1997-	05-10-02	15.07	6,500 <sup>a</sup>	05-10-2002	15.07	6,500 <sup>a</sup>
			Record:					
			04-13-97	13.57	3,120			
			07-04-98	13.83	3,555			
			07-01-99	14.36	4,580			
			06-26-00	11.73	1,190			
			06-06-01	12.89	2,180			
Cuivre River Basin								
05514170 Irvine Branch near Bowling Green, Mo.	Lat 39°17'24", long 91°16'07", in SW 1/4 sec.8, T.52 N., R.3 W., Hydrologic Unit 07110008, Pike County, on downstream side of bridge on State Highway Y, about 6 miles southwest of Bowling Green. Drainage area 12.9 mi <sup>2</sup> , slope 26.3 ft/mi.	1997-	05-16-02	13.32	1,300 <sup>a</sup>	06-04-2001	14.31	1,900 <sup>b</sup>
			Record:					
			1997	<8.81	+			
			07-05-98	13.91	1,600 <sup>b</sup>			
			06-25-99	12.91	1,100			
			06-26-00	11.10	502			
			06-04-01	14.31	1,900 <sup>b</sup>			

## Maximum discharge at crest-stage partial-record stations--continued

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum			
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	
Little Tarkio Creek Basin									
06815530 Little Tarkio Creek near Tarkio, Mo.	Lat 40°24'38", long 95°16'23", in SE 1/4 sec.27, T.65 N., R.39 W., Hydrologic Unit 10240005, Atchison County, on downstream side of bridge on State Highway N, 7 miles east of Tarkio. Drainage area 16.1 mi <sup>2</sup> , slope 19.0 ft/mi.	1997-	2002	<10.35	+	06-14-2001	16± <sup>c</sup>	+	
			Record:						
			05-07-97	11.56	+				
			06-15-98	12.41	+				
			05-21-99	10.46	+				
			2000	<10.36	+				
06-14-01	16± <sup>c</sup>	+							
Platte River Basin									
06819025 Agee Creek near Savannah, Mo.	Lat 40°03'41", long 94°42'01", at center sec.26, T.61 N., R.34 W., Hydrologic Unit 10240012, Andrew County, on downstream side of bridge on State Highway 48, 14 miles northeast of Savannah. Drainage area 6.54 mi <sup>2</sup> , slope 24.5 ft/mi.	1997-	10-05-01	11.76	+	06-19-2001	18.85	+	
			Record:						
			1997-1998	<11.05	+				
			10-05-98	17.37	+				
			2000	<11.05	+				
			06-19-01	18.85	+				
Fishing River Basin									
06894250 New Hope Creek near Holt, Mo.	Lat 39°27'29", long 94°18'22", in SW 1/4 sec.30, T.54 N., R.30 W., Hydrologic Unit 10300101, Clinton County, on downstream side of bridge on State Highway PP, 2 miles east of Holt. Drainage area 6.79 mi <sup>2</sup> , slope 28.6 ft/mi.	1997-	08-18-02	8.69	+	10-05-1998	14.39	+	
			Record:						
			1997	<6.71	+				
			06-23-98	8.79	+				
			10-05-98	14.39	+				
			09-23-00	10.91	+				
06-05-01	11.88	+							
Tabo Creek Basin									
06895192 Tabo Creek near Higginsville, Mo.	Lat 39°04'40", long 93°46'12", in NW 1/4 sec.3, T.49 N., R.26 W., Hydrologic Unit 10300101, Lafayette County, on downstream side of bridge on State Highway FF, 2 miles west of Higginsville. Drainage area 24.0 mi <sup>2</sup> , slope 11.4 ft/mi.	1997-	05-09-02	19.58	+	02-12-1999	19.80	+	
			Record:						
			04-11-97	17.70	+				
			09-14-98	19.65	+				
			02-12-99	19.80	+				
			06-27-00	17.63	+				
06-06-01	18.50	+							
Grand River Basin									
06896370 Big Muddy Creek near Bethany, Mo.	Lat 40°25'38", long 94°10'31", in NW 1/4 sec.21, T.65 N., R.29 W., Hydrologic Unit 10280101, Harrison County, on downstream side of bridge on State Highway M, 18 miles northwest of Bethany. Drain- age area 29.4 mi <sup>2</sup> , slope 14.2 ft/mi.	1997-	2002	<8.22	+	04-08-2001	16.39	+	
			Record:						
			04-15-97	13.38	+				
			07-04-98	14.73	+				
			06-13-99	12.73	+				
			2000	<8.23	+				
04-08-01	16.39	+							
06897507 Marrowbone Creek near Gallatin, Mo.	Lat 39°49'02", long 94°05'34", in SW 1/4 sec.19, T.58 N., R.28 W., Hydrologic Unit 10280101, Daviess County, on downstream side of bridge on State Highway J, 12 miles southwest of Gallatin. Drainage area 17.7 mi <sup>2</sup> , slope 17.1 ft/mi.	1997-	05-06-02	12.95	964	10-05-1998	17.43	+	
			Record:						
			04-16-97	16.38	+				
			07-04-98	17.16	+				
			10-05-98	17.43	+				
			06-25-00	10.46	535				
06-05-01	16.51	+							



## Maximum discharge at crest-stage partial-record stations--continued

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum		
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
Grand River Basin-continued								
06900690 Smokey Creek near Linneus, Mo.	Lat 39°52'51", long 93°19'39", in NE 1/4 sec.2, T.58 N., R.22 W., Hydrologic Unit 10280103, Linn County, on downstream side of bridge on State Highway B, about 7 miles west of Linneus. Drainage area 10.5 mi <sup>2</sup> , slope 13.5 ft/mi.	1997-	05-10-02	14.75	+	02-08-2001	15.43	
			Record:					+
			04-15-97	14.77	+			
			03-19-98	14.34	+			
			10-06-98	15.13	+			
			2000	<10.63	+			
			02-08-01	15.43	+			
06901100 Locust Creek at Reger, Mo.	Lat 40°08'31", long 93°11'07", in NE 1/4 SW 1/4 SE 1/4 sec.30, T.62 N., R.20 W., Hydrologic Unit 10280201, Sullivan County, on down- stream side of State Highway 6 and 0.3 mile east of Reger. Datum of gage is 774.67 ft above sea level. Drainage area 232 mi <sup>2</sup> .	1987-	05-14-02	15.43	6,390	07-07-1993	21.88	19,700
06903190 Rock Branch near Carroll- ton, Mo.	Lat 39°32'10", long 93°27'32", in SE 1/4 sec.34, T.55 N., R.23 W., Hydrologic Unit 10280103, Carroll County, on downstream side of bridge on State Highway WW, 12 miles north of Carrollton. Drain- age area 4.45 mi <sup>2</sup> , slope 30.6 ft/mi.	1997-	05-11-02	13.42	+	11-02-1998	14.53	+
			Record:					
			04-15-97	12.36	+			
			03-17-98	10.98	+			
			11-02-98	14.53	+			
			2000	<6.63	+			
			06-07-01	11.81	+			
Chariton River Basin								
06904600 Spring Creek near Milan, Mo.	Lat 40°20'34", long 92°57'18", in SE 1/4 sec.18, T.64 N., R.18 W., Hydrologic Unit 10280202, Sullivan County, on downstream side of bridge on State Highway 129, 16 miles northeast of Milan or about 5.5 miles north of Green City. Drainage area 13.7 mi <sup>2</sup> , slope 17.8 ft/mi.	1997-	05-20-02	11.72	1,960 <sup>a</sup>	06-06-2001	12.13	+
			Record:					
			1997	<7.40	+			
			06-19-98	8.50	+			
			10-04-98	11.25	+			
			2000	<7.38	+			
			06-06-01	12.13	+			
06904950 Walnut Creek near Novinger, Mo.	Lat 40°06'24", long 92°45'23", in NW 1/4 sec.12, T.61 N., R.17 W., Hydrologic Unit 10280202, Adair County, on downstream side of bridge on State Highways 11 and 149, 11 miles south of Novinger. Drainage area 13.5 mi <sup>2</sup> , slope 14.1 ft/mi.	1997-	05-12-02	22.14	14,000 <sup>a</sup>	05-12-2002	22.14	14,000 <sup>a</sup>
			Record:					
			05-01-97	9.30	648			
			07-26-98	19.86	5,650			
			10-06-98	13.28	1,880			
			2000	<8.97	+			
			07-25-01	14.61	2,390			
Lamine River Basin								
06906715 Lake Creek near Cole Camp, Mo.	Lat 38°30'37", long 93°08'25", in NW 1/4 sec.9, R.43 N., R.20 W., Hydrologic Unit 10300103, Benton County, on downstream side of bridge on State Highway JJ, 6 miles northeast of Cole Camp. Drainage area 12.2 mi <sup>2</sup> , slope 35.3 ft/mi.	1997-	2002	<5.51	+	04-13-2001	15.08	+
			Record:					
			1997	<5.51	+			
			07-26-98	11.53	5,210 <sup>b</sup>			
			05-05-99	9.03	2,490			
			2000	<5.51	+			
			04-13-01	15.08	+			

## Maximum discharge at crest-stage partial-record stations--continued

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum		
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
Lamine River Basin-continued								
06907710 Little Walnut Creek near Knob Noster, Mo.	Lat 38°50'40", long 93°32'50", in SW 1/4 sec.22, T.47 N., R.24 W., Hydrologic Unit 10300104, Johnson County, on downstream side of bridge on State Highway 23, 5 miles north of Knob Noster. Drainage area 8.20 mi <sup>2</sup> , slope 23.3 ft/mi.	1997-	05-12-02	14.50	+	07-30-1998	15.66	+
			Record:					
			04-13-97	8.76	+			
			07-30-98	15.66	+			
			10-06-98	14.11	+			
			05-27-00	14.29	+			
			03-15-01	15.11	+			
06908495 Camp Creek near Marshall, Mo.	Lat 39°06'12", long 93°03'21", in NW 1/4 sec.24, T.50 N., R.20 W., Hydrologic Unit 10300104, Saline County, on downstream side of bridge on State Highway 41, 7 miles east of Marshall. Drainage area 10.8 mi <sup>2</sup> , slope 16.9 ft/mi.	1997-	05-12-02	14.24	+	06-08-2001 05-12-2002	14.24	+
			Record:					
			04-14-97	10.60	1,100			
			07-30-98	13.39	2,650 <sup>b</sup>			
			01-31-99	11.94	1,730 <sup>b</sup>			
			2000	<7.09	+			
			06-08-01	14.24	+			
Bonne Femme Creek Basin								
06909220 Ganaway Creek near Fayette, Mo.	Lat 39°15'54", long 92°39'51", in NW 1/4 sec.36, T.52 N., R.16 W., Hydrologic Unit 10300102, Howard County, on downstream side of culvert on State Highway U, 11 miles north of Fayette or 2.5 miles east of Armstrong. Drainage area 4.55 mi <sup>2</sup> , slope 57.9 ft/mi.	1997-	05-12-02	13.36	+	07-30-1998	14.03	+
			Record:					
			04-11-97	10.68	+			
			07-30-98	14.03	+			
			07-01-99	13.67	+			
			06-21-00	11.69	+			
			06-08-01	13.24	+			
Moniteau Creek Basin								
06910265 Moniteau Creek near Califor- nia, Mo.	Lat 38°43'57", long 92°38'17", in E 1/2 sec.23, T.46 N., R.16 W., Hydrologic Unit 10300102, Cooper County, on downstream side of bridge on State Highway O, 9 miles northwest of California. Drainage area 67.6 mi <sup>2</sup> , slope 16.0 ft/mi.	1997-	08-22-02	11.01	4,800	07-30-1998	15.60	+
			Record:					
			05-27-97	10.08	3,860			
			07-30-98	15.60	+			
			10-20-98	15.57	+			
			03-28-00	9.12	3,010			
			06-08-01	14.49	+			
Osage River Basin								
06918270 Clear Creek near Nevada, Mo.	Lat 37°41'20", long 94°13'35", in SW 1/4 sec.16, T.34 N., R.30 W., Hydrologic Unit 10290105, Vernon County, on downstream side of bridge on State Highway DD, 16 miles southeast of Nevada. Drain- age area 23.2 mi <sup>2</sup> , slope 13.5 ft/mi.	1997-	05-08-02	13.65	1,630	05-05-1999	16.29	+
			Record:					
			02-21-97	13.91	1,870			
			03-20-98	12.49	920			
			05-05-99	16.29	+			
			05-09-00	6.52	220			
			02-28-01	14.38	2,320			
06919004 Bear Creek near Bolivar, Mo.	Lat 37°35'00", long 93°28'02", in NW 1/4 sec.21, T.33 N., R.23 W., Hydrologic Unit 10290106, Polk County, on downstream side of bridge on State Highway T, 3.5 miles southwest of Bolivar. Drainage area 7.45 mi <sup>2</sup> , slope 26.0 ft/mi.	1997-	05-17-02	8.26	1,800 <sup>a</sup>	05-05-1999	8.35	1,850 <sup>b</sup>
			Record:					
			08-19-97	6.54	828			
			03-19-98	6.00	622			
			05-05-99	8.35	1,850 <sup>b</sup>			
			07-12-00	4.88	313			
			07-05-01	6.83	957			

## Maximum discharge at crest-stage partial-record stations--continued

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum		
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
Osage River Basin-continued								
06921712 Clear Creek near Harrison- ville, Mo.	Lat 38°37'35", long 94°11'27", in NW 1/4 sec.12, T.44 N., R.30 W., Hydrologic Unit 10290108, Cass County, on downstream side of bridge on State Highway Z, 9 miles east of Harrisonville. Drainage area 11.4 mi <sup>2</sup> , slope 14.8 ft/mi.	1997-	05-09-02	14.85	+	05-09-2002	14.85	+
			Record:					
			05-27-97	14.18	+			
			09-16-98	12.84	+			
			05-04-99	14.71	+			
			07-12-00	13.44	+			
			06-07-01	12.46	+			
06925432 Barnett Hollow near Camden- ton, Mo.	Lat 37°59'52", long 92°31'39", in SW 1/4 sec.25, T.38 N., R.15 W., Hydrologic Unit 10290109, Camden County, on downstream side of bridge on State Highway A, 14 miles east of Camdenton or 5 miles northeast of Montreal. Drainage area 6.98 mi <sup>2</sup> , slope 55.5 ft/mi.	1997-	04-19-02	7.00	1,700 <sup>a</sup>	04-19-2002	7.00	1,700 <sup>a</sup>
			Record:					
			1997	<4.91	+			
			07-27-98	5.19	+			
			1999-2001	<4.91	+			
Gasconade River Basin								
06927746 Selvage Hollow near Lebanon, Mo.	Lat 37°33'13", long 92°40'52", in NW 1/4 sec.27, T.33 N., R.16 W., Hydrologic Unit 10290201, Laclede County, on downstream side of culvert on State Highway C, 5.5 miles east of Phillipsburg or 9 miles south of Lebanon. Drainage area 9.72 mi <sup>2</sup> slope 40.2 ft/mi.	1997-	05-12-02	3.88	187	07-28-2001	5.49	1,430 <sup>b</sup>
			Record:					
			11-22-96	5.05	870 <sup>a</sup>			
			03-21-98	3.83	174			
			04-16-99	3.76	156			
			2000	<2.04	+			
			07-28-01	5.49	1,430 <sup>b</sup>			
06928850 Hamilton Creek near Cabool, Mo.	Lat 37°11'47", long 92°05'43", in N 1/2 sec.13, T.29 N., R.11 W., Hydrologic Unit 10290202, Texas County, on downstream side of bridge on State Highway PP, 5 miles north of Cabool. Drainage area 9.29 mi <sup>2</sup> , slope 42.9 ft/mi.	1997-	05-20-02	9.42	4,600 <sup>a</sup>	05-20-2002	9.42	4,600 <sup>a</sup>
			Record:					
			02-27-97	5.21	1,070			
			1998	<4.71	+			
			02-07-99	8.51	3,300			
			2000	<4.71	+			
			02-26-01	6.61	1,890			
Loutre River Basin								
06934680 Dry Fork near Hermann, Mo.	Lat 38°46'29", long 91°33'53", in SW 1/4 sec.2, T.46 N., R.6 W., Hydrologic Unit 10300200, Montgomery County, on downstream side of bridge on State Highway P, 11 miles northwest of Hermann or 20 miles south of Montgomery City. Drainage area 7.66 mi <sup>2</sup> , slope 68.7 ft/mi.	1997-	12-18-01	7.56	+	12-18-2001	7.56	+
			Record:					
			06-23-97	7.13	+			
			03-22-98	5.48	+			
			02-08-99	6.49	+			
			06-12-00	6.61	+			
			2001	<3.59	+			
Boeuf Creek Basin								
06935175 Cedar Fork near Gerald, Mo.	Lat 38°27'44", long 91°18'29", in NW 1/4 sec.19, T.43 N., R.3 W., Hydrologic Unit 10300200, Franklin County, on downstream side of bridge on State Highway ZZ, 4.5 miles north of Gerald. Drainage area 8.53 mi <sup>2</sup> , slope 34.3 ft/mi.	1997-	04-20-02	11.07	1,360	05-07-2000	17.67	10,600 <sup>a</sup>
			Record:					
			06-22-97	8.64	634			
			07-26-98	10.44	1,160			
			11-02-98	11.52	1,530			
			05-07-00	17.67	10,600 <sup>a</sup>			
			02-26-01	9.34	831			
Meramec River Basin								

## Maximum discharge at crest-stage partial-record stations--continued

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum		
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
07015757 Upper Peavine Creek near Belle, Mo.	Lat 38°11'54", long 91°42'03", in SE 1/4 sec.16, T.40 N., R.7 W., Hydrologic Unit 07140103, Maries County, on downstream side of bridge on State Highway C, 7 miles south of Belle. Drainage area 6.79 mi <sup>2</sup> , slope 32.0 ft/mi.	1997-	05-09-02	9.21	696 <sup>b</sup>	06-22-1997	12.19	+
			Record:					
			06-22-97	12.19	+			
			06-04-98	10.04	1,050 <sup>b</sup>			
			1999-2000	<8.61	+			
			02-25-01	9.33	742 <sup>b</sup>			
07017733 Bates Creek at Potosi, Mo.	Lat 37°56'35", long 90°48'23", near sec.9, T.37 N., R.2 E., Hydrologic Unit 07140104, Washington County, on down- stream side of bridge on State Highway 8, 0.5 mile west of Potosi. Drainage area 14.1 mi <sup>2</sup> , slope 39.8 ft/mi.	1997-	05-20-02	7.47	1,200 <sup>a</sup>	11-06-1997	8.64	+
			Record:					
			08-20-97	8.44	1,880 <sup>b</sup>			
			11-06-97	8.64	2,050 <sup>b</sup>			
			04-03-99	8.60	2,020 <sup>b</sup>			
			2000	<5.61	+			
			03-15-01	7.19	1,030			
<b>Headwater Diversion Channel Basin</b>								
07020895 Castor River near Freder- icktown, Mo.	Lat 37°34'40", long 90°09'50", in S 1/2 sec.4, T.33 N., R.8 E., Hydrologic Unit 07140107, Madison County, on downstream side of bridge on State Highway J, 7 miles east of Fredericktown. Drainage area 33.5 mi <sup>2</sup> , slope 28.6 ft/mi.	1997-	05-20-02	12.30	5,810	04-03-1999	15.58	11,500 <sup>a</sup>
			Record:					
			05-31-97	10.20	3,780			
			03-20-98	10.42	3,960			
			04-03-99	15.58	11,500 <sup>a</sup>			
			02-26-00	6.30	1,100			
			02-25-01	8.30	2,330			
07020965 Bear Creek near Patterson, Mo.	Lat 37°13'30", long 90°19'31", in SW 1/4 sec.31, T.30 N., R.7 E., Hydrologic Unit 07140107, Wayne County, on downstream side of bridge on State Highway 34, 10.5 miles east of Patterson or 20 miles west of Marble Hill. Drainage area 13.1 mi <sup>2</sup> , slope 33.5 ft/mi.	1997-	05-19-02	13.46	8,890 <sup>a</sup>	05-19-2002	13.46	8,890 <sup>a</sup>
			Record:					
			05-31-97	8.91	2,230			
			04-18-98	8.19	1,840			
			04-03-99	9.00	2,280			
			06-18-00	11.58	4,390			
			2001	<6.30	+			
<b>White River Basin</b>								
07050545 North Carolina Creek near Marshfield, Mo.	Lat 37°14'53", long 93°00'30", in SE 1/4 sec.4, T.29 N., R.19 W., Hydrologic Unit 11010002, Webster County, on downstream side of culvert on State Highway B, 8 miles southwest of Marshfield. Drainage area 6.30 mi <sup>2</sup> , slope 57.0 ft/mi.	1997-	05-20-02	5.51	+	05-20-2002	5.51	+
			Record:					
			11-07-96	4.35	1,000 <sup>a</sup>			
			03-20-98	3.23	142			
			05-05-99	5.41	+			
			2000	<2.39	+			
			02-24-01	3.33	174			
07052370 Dry Crane Creek near Crane, Mo.	Lat 36°56'18", long 93°26'05", in SE 1/4 sec.22, T.26 N., R.23 W., Hydrologic Unit 11010002, Stone County, on downstream side of bridge on State Highway A, 10 miles east of Crane. Drainage area 10.9 mi <sup>2</sup> , slope 29.6 ft/mi.	1997-	2002	<8.30	+	03-20-1998	8.79	+
			Record:					
			1997	<8.30	+			
			03-20-98	8.79	+			
			1999-2002	<8.30	+			

White River Basin-continued

## Maximum discharge at crest-stage partial-record stations--continued

Station number and name	Location and basin characteristics	Period of record	Water year 2002 maximum			Period of record maximum		
			Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)	Probable date	Gage height (feet)	Dis- charge (ft <sup>3</sup> /s)
07054047 Little Beaver Creek near Ava, Mo.	Lat 36°53'55", long 92°52'04", in SW 1/4 sec.36, T.26 N., R.18 W., Hydrologic Unit 11010003, Douglas County, on downstream side of bridge on State Highway T, 13 miles southwest of Ava. Drainage area 25.5 mi <sup>2</sup> , slope 47.4 ft/mi.	1997-	05-19-02	10.72	3,380 <sup>b</sup>	05-19-2002	10.72	3,380 <sup>b</sup>
			Record: 1997-1998	<7.17	+			
			05-05-99	9.99	2,640 <sup>b</sup>			
			2000-2001	<7.14	+			
07061260 East Fork Black River near Ironton, Mo.	Lat 37°36'14", long 90°47'19", in SE 1/4 sec.35, T.34 N., R.2 E., Hydrologic Unit 11010007, Iron County, on downstream side of bridge on State Highway N, 10 miles west of Ironton at Iron/Rey- nolds County line. Drainage area 16.2 mi <sup>2</sup> , slope 60.7 ft/mi.	1997-	05-19-02	15.41	9,900 <sup>a</sup>	05-19-2002	15.41	9,900 <sup>a</sup>
			Record: 05-31-97	10.02	2,260			
			03-19-98	7.62	603			
			02-07-99	10.42	2,640			
			2000	<7.04	+			
			07-29-01	7.78	680			
07063470 Tenmile Creek near Poplar Bluff, Mo.	Lat 36°46'59", long 90°33'35", in SE 1/4 sec.30, T.25 N., R.5 E., Hydrologic Unit 11010007, Butler County, on downstream side of bridge on State Highway TT, 8 miles west of Poplar Bluff. Drainage area 59.0 mi <sup>2</sup> , slope 17.0 ft/mi.	1997-	05-19-02	13.81	11,700 <sup>b</sup>	05-19-2002	13.81	11,700 <sup>b</sup>
			Record: 04-06-97	11.82	8,130 <sup>b</sup>			
			07-31-98	7.10	2,780			
			04-04-99	8.79	4,440			
			06-18-00	9.26	4,950			
			07-29-01	5.56	1,500			
07071750 Louse Creek near Alton, Mo.	Lat 36°34'37", long 91°19'06", near center sec.8, T.22 N., R.3 W., Hydrologic Unit 11010011, Oregon County, on downstream side of bridge on State Highway E, 10 miles southeast of Alton. Drain- age area 5.69 mi <sup>2</sup> , slope 48.1 ft/mi.	1997-	01-30-02	5.74	364 <sup>b</sup>	04-05-1997	7.20	+
			Record: 04-05-97	7.20	+			
			1998-1999	<4.44	+			
			06-18-00	7.00	+			
			06-14-01	5.48	282			

+ Not determined.

<sup>a</sup> Discharge determined by indirect method.<sup>b</sup> Rating extrapolated beyond indirect peak discharge.<sup>c</sup> Gage height based on poor field estimate.

WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

[illegible]

## WATER-QUALITY DATA, WATER YEAR OCTOBER 2001 TO SEPTEMBER 2002

DATE	NITRO- GEN, AM- MONIA + ORGANIC TOTAL (mg/L as N) (00625)	NITRO- GEN, NO <sub>2</sub> +NO <sub>3</sub> DIS- SOLVED (mg/L as N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (mg/L as N) (00613)	PHOS- PHOS- PHOS- DIS- SOLVED (mg/L as P) (00666)	PHOS- PHOS- PHOS- DIS- SOLVED (mg/L as P) (00671)	PHOS- PHORUS TOTAL (mg/L as P) (00665)	E COLI, MTEC MF WATER (col./ 100 mL) (31633)	COLI- FORM, FECAL, 0.7 µm-MF (col./ 100 mL) (31625)	FECAL STREP, KF STRP MF, WATER (col./ 100 mL) (31673)	CADMIUM WATER UNFLTRD TOTAL (µg/L as Cd) (01027)	LEAD, TOTAL RECOV- ERABLE (µg/L as Pb) (01051)	SILVER, TOTAL RECOV- ERABLE (µg/L As Ag) (01077)	ZINC, TOTAL RECOV- ERABLE (µg/L as Zn) (01092)
07064400 MONTAUK SPRINGS AT MONTAUK													
OCT 03...	<.10	.61	<.008	<.06	<.02	<.06	K8	K12	48	<.1	<1	<.3	<20
MAY 30...	E.06	.44	<.008	<.06	<.02	<.06	K8	K8	27	<.1	<1	<.3	E20
07064440 CURRENT RIVER BELOW MONTAUK STATE PARK													
OCT 03...	.11	.47	E.007	<.06	<.02	E.03	K9	21	K17	<.1	<1	<.3	<20
MAY 30...	<.10	<.05	<.008	<.06	<.02	<.06	--	--	--	<.1	<1	<.3	E20
30...	.13	.43	<.008	<.06	<.02	<.06	K3	21	22	<.1	<1	<.3	E20
07064530 WELCH SPRING NEAR AKERS MO													
OCT 03...	<.10	.57	<.008	<.06	<.02	<.06	K2	K3	K3	<.1	<1	<.3	<20
MAY 30...	E.08	.82	<.008	<.06	<.02	<.06	21	K12	48	<.1	<1	<.3	<20
07064555 PULLTITE SPRING NEAR ROUND SPRING													
OCT 03...	<.10	.45	<.008	<.06	<.02	<.06	K9	K12	38	<.1	<1	<.3	<20
MAY 30...	E.09	.33	<.008	<.06	E.01	<.06	K14	K14	26	<.1	<1	<.3	<20
07065000 ROUND SPRING AT ROUND SPRING													
OCT 02...	<.10	.29	<.008	<.06	<.02	<.06	K9	K10	K13	<.1	<1	<.3	<20
MAY 29...	E.07	.43	<.008	<.06	<.02	<.06	27	23	36	<.1	<1	<.3	<20
07065500 ALLEY SPRING AT ALLEY													
OCT 02...	<.10	.50	E.006	<.06	<.02	<.06	K7	K7	K15	<.1	<1	<.3	<20
02...	<.10	.490	.020	<.060	<.020	<.060	--	--	--	<.1	<1	<.3	<20
MAY 29...	E.07	.61	<.008	<.06	E.01	<.06	31	K71	62	<.1	<1	<.3	E20
07066510 CURRENT RIVER ABOVE POWDER MILL													
OCT 02...	<.10	.19	<.008	<.06	<.02	<.06	K4	K11	K7	<.1	<1	<.3	<20
MAY 29...	E.10	.36	<.008	<.06	<.02	<.06	K8	K15	20	<.1	<1	<.3	60
07066550 BLUE SPRING NEAR EMINENCE													
OCT 02...	<.10	.32	<.008	<.06	<.02	<.06	<1	K3	K3	<.1	<1	<.3	<20
MAY 28...	E.05	.60	<.008	<.06	<.02	<.06	K6	K9	K9	<.1	<1	<.3	E10
07067800 CURRENT RIVER BELOW HAWES CAMPGROUND													
OCT 01...	<.10	.14	<.008	<.06	<.02	<.06	<1	K3	K3	<.1	<1	<.3	<20
MAY 29...	E.06	.36	<.008	<.06	<.02	<.06	K16	59	150	<.1	<1	<.3	<20
29...	E.10	.36	<.008	<.06	<.02	<.06	67	43	125	<.1	<1	<.3	E20

K--Results based on colony count outside the acceptable range (non-ideal colony count).

E--Laboratory estimated value.

&lt;--Numeric result is less than the value shown.

A		
Access to USGS water data .....	18	
Accuracy of data and computed results .....	14	
Acid neutralizing capacity, definition of ..	19	
Acre-foot, definition of .....	19	
Adenosine triphosphate, definition of .....	19	
Agee Creek near Savannah .....	530	
Agency		
Platte River near .....	101	
Akers		
Current River above .....	472	
Welch Spring near .....	536	
Algae		
Blue-green, definition of .....	20	
Fire, definition of .....	23	
Green, definition of .....	24	
Algal growth potential, definition of .....	19	
Alkalinity, definition of .....	19	
Allendale		
East Fork Grand River at .....	136	
Alley		
Alley Spring at .....	536	
Alley Spring below .....	477	
Alley Spring		
Jacks Fork above .....	475	
Jacks Fork at .....	476	
Alley Spring at Alley .....	536	
below Alley .....	477	
Alton		
Louse Creek near .....	535	
Ambient Water-Quality Network,		
definition of .....	8	
Analyses of samples collected at water-		
quality partial-record stations .....	536	
Annapolis		
Black River below .....	467	
Black River near .....	466	
Annual 7-day minimum, definition of .....	19	
Annual runoff, definition of .....	19	
Arkansas River Basin,		
hydrologic records in .....	504	
Arnold		
Martigney Creek near .....	309	
Aroclor .....	19	
Arrangement of records .....	15	
Artificial substrate, definition of .....	19	
Ash mass, definition of .....	19	
Aspect, definition of .....	19	
Atlanta		
Long Branch Creek at .....	167	
Ava		
Little Beaver Creek near .....	535	
B		
Bacteria, definition of .....	19	
Bagnell		
Lake of the Ozarks near .....	214	
Osage River near .....	215	
Ballwin		
Kiefer Creek near .....	330	
Bankfull stage, definition of .....	19	
Bardley		
Eleven Point River near .....	501	
Barnett Hollow near Camdenton .....	533	
Base discharge, definition of .....	19	
Base flow, definition of .....	20	
Bates Creek at Potosi .....	534	
Battlefield		
Wilson Creek near .....	412	
Bear Creek at Hannibal .....	60	
near Bolivar .....	532	
near Patterson .....	534	
Bear Creek Basin, hydrologic records in ....	60	
Beaver Creek at Bradleyville .....	452	
Bed load, definition of .....	20	
Bed material, definition of .....	20	
Bed-load discharge, definition of .....	20	
Belle		
Upper Peavine Creek near .....	534	
Bellefontaine Neighbors		
Maline Creek at .....	274	
Watkins Creek at .....	270	
Bennett Spring		
Nangua River below .....	211	
Benthic organisms, definition of .....	20	
Berryman		
Courtois Creek at .....	315	
Bethany		
Big Muddy Creek near .....	530	
East Fork Big Creek near .....	138	
Big Creek at Des Arc .....	380	
at Sam A. Baker State Park .....	381	
Big Muddy Creek near Bethany .....	530	
Big Piney		
Big Piney River near .....	225	
Big Piney River at Devil's Elbow .....	227	
below Ft. Leonard Wood .....	226	
near Big Piney .....	225	
Big River at Byrnesville .....	328	
at Irondale .....	324	
near Richwoods .....	325	
Big Spring near Van Buren .....	490	
Big Sugar Creek near Powell .....	517	
Biochemical oxygen demand, definition of ...	20	
Biomass pigment ratio, definition of .....	20	
Biomass, definition of .....	20	
Black Jack		
Coldwater Creek near .....	265	
Spanish Lake Trib near .....	269	
Black River at Poplar Bluff .....	471	
below Annapolis .....	467	
near Annapolis .....	466	
Blackwater River near Blue Lick .....	177	
Blank samples, explanation of .....	17	
Blue Lick		
Blackwater River near .....	177	
Blue River at Kansas City .....	109	
at 12th St in Kansas City .....	129	
Blue River Basin, hydrologic records in ....	109	
Blue Spring near Eminence .....	536	
Blue Springs		
Blue Springs Reservoir near .....	131	
Blue Springs Reservoir near Blue Springs ...	131	
Blue-green algae, definition of .....	20	
Boaz		
James River near .....	419	
Boeuf Creek Basin, hydrologic records in ...	533	



Boliviar		Caulks Creek at Chesterfield	247
Bear Creek near	532	Cedar Creek near Pleasant View	196
Bonhomme Creek near Clarkson Valley	242	Cedar Fork near Gerald	533
near Ellisville	241	Cells volume, definition of	20
Bonne Femme Creek Basin,		Cells/volume, definition of	20
hydrologic records in	532	Center	
Boonville		Mark Twain Lake near	69
Missouri River at	178	Salt River near	71
Bottom material, definition of	20	Center Creek near Smithfield	507
Bourbeuse River above Union	321	Centerville	
at Union	323	West Fork Black River at	459
near High Gate	320	Cfs-day, definition of	20
Bowling Green		Channel bars, definition of	20
Irvine Branch near	529	Chariton River at Livonia	160
Bradleyville		at Novinger	161
Beaver Creek at	452	near Prairie Hill	162
Branson		Chariton River Basin,	
Lake Taneycomo at	445	hydrologic records in	160
Table Rock Lake near	439	Chemical oxygen demand, definition of	20
White River bl Table Rock Dam near	440	Chester, IL	
White River near	442	Mississippi River at	360
Bridgeton		Chesterfield	
Cowmire Creek at	259	Caulks Creek at	247
Fee Fee Creek near	253	Creve Coeur Creek at	248
Brookline		Clarkson Valley	
Wilson Creek near	407	Bonhomme Creek near	242
Brush Creek		Classification of records	15
at Rockhill Rd in Kansas City	119	Clear Creek near Harrisonville	533
at Ward Pkwy in Kansas	118	near Nevada	532
Brushy Creek near Queen City	529	Clearwater Lake near Piedmont	470
Bryant Creek below Evans	456	Clinton	
near Tecumseh	458	South Grand River near	208
Buffalo Creek at Tiff City	527	Clostridium perfringens, definition of	21
Bulk electrical conductivity,		Coldwater Creek near Black Jack	265
definition of	20	Cole Camp	
Bull Creek near Walnut Shade	449	Lake Creek near	531
Burgermeister Spring near Weldon Spring	79	Coliphages, definition of	21
Butler		College of the Ozarks	
Miami Creek near	180	Lake Taneycomo at	443
Byrnesville		Color unit, definition of	21
Big River at	328	Confined aquifer, definition of	21
		Contents, definition of	21
		Contents, table of	v
		Continuous-record station, definition of	21
Cabool		Control structure, definition of	21
Hamilton Creek near	533	Control, definition of	21
Calendar for water year 2002	Front Cover	Cooperation	1
California		Courtois Creek at Berryman	315
Moniteau Creek near	532	Cowmire Creek at Bridgeton	259
Camdenton		Crane	
Barnett Hollow near	533	Dry Crane Creek near	534
Camp Creek near Marshall	532	Creve Coeur	
Canton		Creve Coeur Creek near	249
Wyaconda River above	49	Creve Coeur Creek at Chesterfield	248
Caplinger Mills		near Creve Coeur	249
Sac River near	197	Crooked Creek near Paris	63
Carrollton		Cubic foot per second per square mile,	
Rock Branch near	531	definition of	21
Carthage		Cubic foot per second, definition of	21
Spring River near	504	Cubic foot per second-day, definition of	21
Cassville		Cuivre River Basin,	
Roaring River Spring near	396	hydrologic records in	74
Castor River at Zalma	365	Cuivre River near Troy	74
near Fredericktown	534		

Current River above Akers .....	472	East Fork Black River near Ironton .....	461,535
above Powder Mill .....	536	near Lesterville .....	463
at Doniphan .....	493	East Fork Grand River at Allendale .....	136
at Van Buren .....	489	East Fork Little Chariton River	
below Hawes Campground .....	536	near Huntsville .....	170
below Montauk State Park .....	536	near Macon .....	169
D			
Dadeville		Edina	
Sac River near .....	188	Little Fabius River near .....	529
Daily mean suspended-sediment		Eleven Point River near Bardley .....	501
concentration, definition of .....	21	Elk Fork Salt River near Madison .....	67
Daily-record station, definition of .....	21	Elk River near Tiff City .....	521
Dardenne Creek at O'Fallon .....	77	Ellington	
at Old Town St. Peters .....	78	Logan Creek at .....	469
Dardenne Creek Basin,		Ellisville	
hydrologic records in .....	77	Bonhomme Creek near .....	241
Data collection and computation .....	10	Embeddedness, definition of .....	22
Data collection platform, definition of ....	21	Eminence	
Data logger, definition of .....	21	Blue Spring near .....	536
Data presentation .....	11,16	Jacks Fork ab 2nd unnamed hollow bl ....	481
Data table of daily mean values .....	12	Jacks Fork ab Lick Log Hollow bl .....	482
Datum, definition of .....	21	Jacks Fork at .....	479
Davis Creek at Mound City .....	91	Mahans Creek above .....	478
Deer Creek at Ladue .....	292	Engelholm Creek near Wellston .....	288
at Maplewood .....	299	Enterococcus bacteria, definition of .....	22
Deerfield		EPT Index, definition of .....	22
Dry Wood Creek near .....	182	Escherichia coli (E. coli),	
Definition of terms .....	19	definition of .....	23
Des Arc		Estimated (E) concentration value,	
Big Creek at .....	380	definition of .....	23
DeSoto, KS		Euglenoids, definition of .....	23
Kansas River at .....	107	Eureka	
Devil's Elbow		Meramec River near .....	329
Big Piney River at .....	227	Evans	
Diagram showing system for numbering		Bryant Creek below .....	456
miscellaneous sites (latitude		Ewing	
and longitude) .....	10	Troublesome Creek near .....	52
Diatom, definition of .....	21	Explanation of the records .....	9
Diel, definition of .....	21	Extractable organic halides,	
Discharge at partial-record stations .....	529	definition of .....	23
Discharge, definition of .....	22	F	
Dissolved oxygen, definition of .....	22	Fabius River Basin,	
Dissolved trace-element concentrations .....	17	hydrologic records in .....	50
Dissolved, definition of .....	22	Factors for converting inch-pound units	
Dissolved-solids concentration,		to International System Units (SI) .....	Back
definition of .....	22		Cover
Diversity index, definition of .....	22	Fairdealing	
Doniphan		Little Black River below .....	496
Current River at .....	493	Fayette	
Downstream order and station number .....	9	Ganaway Creek near .....	532
Drainage area, definition of .....	22	Fecal coliform bacteria, definition of .....	23
Drainage basin, definition of .....	22	Fecal streptococcal bacteria,	
Dry Crane Creek near Crane .....	534	definition of .....	23
Dry Fork near Hermann .....	533	Fee Fee Creek near Bridgeton .....	253
Dry mass, definition of .....	22	Fenton	
Dry weight, definition of .....	22	Fenton Creek near .....	349
Dry Wood Creek near Deerfield .....	182	Yarnell Creek at .....	348
Dunlap		Fenton Creek near Fenton .....	349
No Creek near .....	145	Finley Creek below Riverdale .....	426
E			
East Fork Big Creek near Bethany .....	138	Fire algae, definition of .....	23
		Fishing River Basin,	
		hydrologic records in .....	530
		Fishpot Creek at Valley Park .....	338
		Flat Creek at Jenkins .....	437

		H	
Florissant		Habitat quality index, definition of .....	24
Mill Creek near .....	264	Habitat, definition of .....	24
Flow, definition of .....	22	Hagers Grove	
Flow-duration percentiles, definition of ...	23	North Fork Salt River at .....	61
Fox River at Wayland .....	46	Hamilton Creek near Cabool .....	533
Fox River Basin, hydrologic records in .....	46	Hannibal	
Frankford		Bear Creek at .....	60
Spencer Creek below Plum Creek near ....	73	Hardness, definition of .....	24
Fredericktown		Harris	
Castor River near .....	534	Little Medicine Creek near .....	150
Freeman		Medicine Creek at .....	147
South Grand River below .....	204	Harrisonville	
Ft. Leonard Wood		Clear Creek near .....	533
Big Piney below .....	226	Harry S. Truman Reservoir at Warsaw .....	209
Roubidoux Creek above .....	220	Hawes Campground	
Roubidoux Creek below .....	221	Current River below .....	536
G		Hazelgreen	
Gage datum, definition of .....	23	Gasconade River near .....	219
Gage height, definition of .....	23	Headwater Diversion Channel Basin,	
Gage values, definition of .....	23	hydrologic records in .....	365
Gaging station, definition of .....	23	Hermann	
Galena		Dry Fork near .....	533
James River at .....	431	Missouri River at .....	235
Gallatin		Hermitage	
Grand River near .....	139	Pomme de Terre Lake near .....	202
Marrowbone Creek near .....	530	Pomme de Terre River near .....	203
Ganaway Creek near Fayette .....	532	Higginsville	
Gas chromatography/flame ionization		Tabo Creek near .....	530
detector, definition of .....	23	High Gate	
Gasconade River above Jerome .....	229	Bourbeuse River near .....	320
at Jerome .....	233	High tide, definition of .....	24
near Hazelgreen .....	219	Hilsenhoff's Biotic Index, definition of ...	24
near Rich Fountain .....	234	Holliday	
Gasconade River Basin,		Middle Fork Salt River near .....	66
hydrologic records in .....	219	Holt	
Geomorphic channel units, definition of ....	24	New Hope Creek near .....	530
Gerald		Horizontal datum, definition of .....	24
Cedar Fork near .....	533	Horton	
Glasgow		Little Osage River at .....	181
Missouri River at .....	173	Huntsville	
Grafton, IL		East Fork Little Chariton River near ....	170
Mississippi River at .....	82	Huzzah Creek near Steelville .....	313
Graham		Hydrologic Benchmark Network .....	8
Nodaway River near .....	93	Hydrologic index stations, definition of ...	24
Grand Glaize Creek near Manchester .....	342	Hydrologic unit, definition of .....	24
near Valley Park .....	344	I	
Grand River Basin, hydrologic records in ...	134	Identifying estimated daily discharge .....	14
Grand River near Gallatin .....	139	Illustrations, list of .....	vi
near Sumner .....	155	Inch, definition of .....	24
Grant City		Indian Creek near Lanagan .....	518
Middle Fork Grand River near .....	134	Instantaneous discharge, definition of ....	24
Graphs showing comparison of 2002 water-		Introduction .....	1
year mean discharge to long-term mean		Irondale	
discharge .....	6	Big River at .....	324
Gravois Creek near Mehlville .....	305	Ironton	
Green algae, definition of .....	24	East Fork Black River near .....	461,535
Greenfield		Irvine Branch near Bowling Green .....	529
Turnback Creek above .....	189	Island, definition of .....	24
Greer			
Greer Spring at .....	498		
Greer Spring at Greer .....	498		

J			
Jacks Fork above Alley Spring .....	475	Long Branch Reservoir near Macon .....	168
ab 2nd unnamed hollow bl Eminence .....	481	Longview Reservoir at Kansas City .....	130
ab L. Shawnee Creek ab Two Rivers .....	487	Mark Twain Lake near Center .....	69
ab Lick Log Hollow bl Eminence .....	482	Pomme de Terre Lake near Hermitage .....	202
ab Powell Spring ab Two Rivers .....	485	Smithville Reservoir near Smithville ...	103
above Two Rivers .....	483	Stockton Lake near Stockton .....	194
at Alley Spring .....	476	Table Rock Lake near Branson .....	439
at Eminence .....	479	Wappapello Lake at Wappapello .....	384
bl 3rd unnamed hollow ab Two Rivers ....	488	Lamine River Basin, hydrologic records in ..	174
near Mountain View .....	474	Lamine River near Otterville .....	174
James River at Galena .....	431	near Pilot Grove .....	175
near Boaz .....	419	Lanagan	
near Springfield .....	403	Indian Creek near .....	518
Jefferson City		Land-surface datum, definition of .....	24
Moreau River near .....	179	Laredo	
Jenkins		Medicine Creek at .....	149
Flat Creek at .....	437	Latent heat flux, definition of .....	24
Jerome		Lebanon	
Gasconade River above .....	229	Selvage Hollow near .....	533
Gasconade River at .....	233	Lesterville	
Joplin		East Fork Black River near .....	463
Shoal Creek above .....	516	Taum Sauk Creek near .....	464
Turkey Creek near .....	512	Lewistown	
K		Troublesome Creek near .....	529
Kansas City		Lick Creek at Perry .....	68
Blue River at .....	109	Light-attenuation coefficient,	
Blue River at 12th St in .....	129	definition of .....	25
Brush Creek at Rockhill Rd in .....	119	Lindley Creek near Polk .....	201
Brush Creek at Ward Pkwy in .....	118	Linneus	
Longview Reservoir at .....	130	Locust Creek near .....	154
Missouri River at .....	108	Smokey Creek near .....	531
Kansas River at DeSoto, KS .....	107	Lipid, definition of .....	25
Kansas River Basin,		List of discontinued surface-water	
hydrologic records in .....	107	discharge or stage-only stations .....	xii
Kiefer Creek near Ballwin .....	330	List of discontinued surface-water	
Kirkwood		quality stations .....	xv
Sugar Creek at .....	343	List of surface-water stations, in	
Knob Noster		downstream order, for which records	
Little Walnut Creek near .....	532	are published in this volume .....	vii
L		Little Beaver Creek near Ava .....	535
Laboratory measurements .....	16	Little Black River below Fairdealing .....	496
Laboratory reporting level,		Little Blue River Basin,	
definition of .....	24	hydrologic records in .....	130
Ladue		Little Blue River near Lake City .....	132
Deer Creek at .....	292	Little Chariton River Basin,	
Lake City		hydrologic records in .....	167
Little Blue River near .....	132	Little Fabius River near Edina .....	529
Lake Creek near Cole Camp .....	531	Little Medicine Creek near Harris .....	150
Lake of the Ozarks near Bagnell .....	214	Little Osage River at Horton .....	181
Lake Taneycomo at Branson .....	445	Little Piney Creek at Newburg .....	232
at College of the Ozarks .....	443	Little Platte River at Smithville .....	104
Lakes and Reservoirs		near Plattsburg .....	102
Blue Springs Reservoir		Little River Ditch 1 near Morehouse .....	391
near Blue Springs .....	131	Little River Ditches near Rives .....	392
Clearwater Lake near Piedmont .....	470	Little Sac River near Morrisville .....	193
Harry S. Truman Reservoir at Warsaw ....	209	near Walnut Grove .....	191
Lake of the Ozarks near Bagnell .....	214	Little Tarkio Creek Basin,	
Lake Taneycomo		hydrologic records in .....	530
at Branson .....	445	Little Tarkio Creek near Tarkio .....	530
at College of the Ozarks .....	443	Little Walnut Creek near Knob Noster .....	532
		Livonia	
		Chariton River at .....	160
		Locust Creek at Reger .....	531
		near Linneus .....	154
		near Unionville .....	152

Logan Creek at Ellington .....	469	Maryville	
Long Branch Creek at Atlanta .....	167	One Hundred and Two River at .....	100
Long Branch near Santa Fe .....	65	Mattese	
Long Branch Reservoir near Macon .....	168	Mattese Creek near .....	355
Long-term method detection level,		Mattese Creek near Mattese .....	355
definition of .....	25	Maximum discharge at crest-stage	
Longview Reservoir at Kansas City .....	130	partial-record stations .....	529
Louse Creek near Alton .....	535	Mean concentration of suspended sediment,	
Loutre River Basin,		definition of .....	25
hydrologic records in .....	533	Mean discharge, definition of .....	25
Low flow, 7-day 10-year, definition of .....	29	Mean high tide, definition of .....	25
Low tide, definition of .....	25	Mean low tide, definition of .....	25
Lower Mississippi River Basin,		Mean sea level, definition of .....	25
hydrologic records in .....	270	Measuring point, definition of .....	25
M			
Mackenzie Creek near Shrewsbury .....	304	Medicine Creek at Harris .....	147
Macks Creek		at Laredo .....	149
Niangua River at Tunnel Dam near .....	213	Mehlville	
Macon		Gravois Creek near .....	305
East Fork Little Chariton River near ...	169	Membrane filter, definition of .....	25
Long Branch Reservoir near .....	168	Meramec River at Paulina Hills .....	353
Macrophytes, definition of .....	25	near Eureka .....	329
Madison		near Steelville .....	312
Elk Fork Salt River near .....	67	near Sullivan .....	317
Mahans Creek above Eminence .....	478	Meramec River Basin,	
Maline Creek at Bellefontaine Neighbors ....	274	hydrologic records in .....	310
Manchester		Metamorphic stage, definition of .....	25
Grand Glaize Creek near .....	342	Method detection limit, definition of .....	25
Map showing location of crest-stage		Methylene blue active substances,	
partial record stations .....	528	definition of .....	25
Map showing location of Metropolitan		Miami Creek near Butler .....	180
St. Louis Sewer District stations .....	39	Micrograms per gram, definition of .....	25
Map showing location of stations		Micrograms per kilogram, definition of .....	25
in the Bootheel .....	45	Micrograms per liter, definition of .....	26
Map showing location of stations		Microsiemens per centimeter,	
in the East Ozarks .....	44	definition of .....	26
Map showing location of stations		Middle Fabius River near Monticello .....	51
in the Northeast Prairie .....	41	Middle Fork Grand River near Grant City ....	134
Map showing location of stations		Middle Fork Salt River near Holliday .....	66
in the Northwest Prairie .....	40	Milan	
Map showing location of stations		Spring Creek near .....	531
in the West Central Plains .....	42	Mill Creek	
Map showing location of stations		St. Francis River near .....	377
in the West Ozarks .....	43	Mill Creek near Florissant .....	264
Map showing location of surface-water		Milligrams per liter, definition of .....	26
quality stations .....	38	Minimum reporting level, definition of .....	26
Map showing location of surface-water		Miscellaneous site, definition of .....	26
stations .....	37	Mississippi River at Chester, IL .....	360
Map showing major drainage basin,		at Grafton, IL .....	82
physiographic areas, and areas of		at St. Louis .....	278
greater-than-mean discharge		at Thebes, IL .....	368
during 2002 .....	5	Mississippi River Main Stem,	
Maplewood		hydrologic records in .....	82
Deer Creek at .....	299	Missouri River at Boonville .....	178
Maramec Spring near St. James .....	310	at Glasgow .....	173
Mark Twain Lake near Center .....	69	at Hermann .....	235
Marmaton River below Nevada .....	183	at Kansas City .....	108
Marrowbone Creek near Gallatin .....	530	at Rulo, NE .....	90
Marshall		at St. Charles .....	258
Camp Creek near .....	532	at St. Joseph .....	97
Marshfield		at Waverly .....	133
North Carolina Creek near .....	534	Missouri River Main Stem,	
Martigney Creek near Arnold .....	309	hydrologic records in .....	90
		Moberly	
		Mud Creek near .....	529



Perry		Records of stage and water discharge	10
Lick Creek at	68	Records of surface-water quality	15
Perryville		Recoverable, bottom material,	
South Fork Saline Creek near	364	definition of	28
Pesticides, definition of	27	Recurrence interval, definition of	29
pH, definition of	27	Reference samples, explanation of	18
Physiography	4	Reger	
Phytoplankton, definition of	28	Locust Creek at	531
Picocurie, definition of	28	Remark codes	17
Piedmont		Replicate samples, definition of	29
Clearwater Lake near	470	Replicate samples, explanation of	18
Pilot Grove		Report documentation page	iv
Lamine River near	175	Return period, definition of	29
Pioneer		Rich Fountain	
Shoal Creek at	515	Gasconade River near	234
Plankton, definition of	28	Richwoods	
Platte River at Sharps Station	105	Big River near	325
near Agency	101	Riffle, definition of	29
Platte River Basin,		River des Peres near University City	282
hydrologic records in	100	River des Peres Trib at Pagedale	287
Plattsburg		River mileage, definition of	29
Little Platte River near	102	Riverdale	
Pleasant View		Finley Creek below	426
Cedar Creek near	196	Rives	
Polk		Little River Ditches near	392
Lindley Creek near	201	Roaring River Spring near Cassville	396
Pomme de Terre River near	198	Rock Branch near Carrollton	531
Polychlorinated biphenyls (PCB s),		Roubidoux Creek above Ft. Leonard Wood	220
definition of	28	below Ft. Leonard Wood	221
Polychlorinated naphthalenes,		Roubidoux Spring at Waynesville	222
definition of	28	Round Spring	
Pomme de Terre Lake near Hermitage	202	Pulltite Spring near	536
Pomme de Terre River near Hermitage	203	Round Spring at	536
near Polk	198	Round Spring at Round Spring	536
Pool, definition of	28	Rulo, NE	
Poplar Bluff		Missouri River at	90
Black River at	471	Run, definition of	29
Tenmile Creek near	535	Runoff, definition of	29
Potosi			
Bates Creek at	534	S	
Powder Mill			
Current River above	536	Sac River at Highway J below Stockton	195
Powell		near Caplinger Mills	197
Big Sugar Creek near	517	near Dadeville	188
Prairie Hill		Saco	
Chariton River near	162	St. Francis River near	378
Preface	iii	Saline Creek Basin,	
Primary productivity, definition of	28	hydrologic records in	364
Carbon method, definition of	28	Salt River Basin, hydrologic records in	61
Oxygen method, definition of	28	Salt River near Center	71
Princeton		near New London	72
Weldon River at	142	Sam A. Baker State Park	
Pulltite Spring near Round Spring	536	Big Creek at	381
		Santa Fe	
Q		Long Branch near	65
		South Fork Salt River above	64
Quality assurance of water-quality data	16	Savannah	
Queen City		Agee Creek near	530
Brushy Creek near	529	Schell City	
		Osage River above	184
R		Sea level, definition of	29
		Sediment	16
Radiochemical programs, definition of	9	Sediment, definition of	29
Radioisotopes, definition of	28	Selvage Hollow near Lebanon	533
Reach, definition of	28	Sensible heat flux, definition of	29

Sharps Station		St. Francis River at Wappapello .....	386
Platte River at .....	105	near Mill Creek .....	377
Shawnee Creek above Two Rivers .....	486	near Patterson .....	383
Shelbina		near Saco .....	378
North Fork Salt near .....	62	St. Francis River Basin,	
Shelves, definition of .....	29	hydrologic records in .....	377
Shoal Creek above Joplin .....	516	St. James	
at Pioneer .....	515	Maramec Spring near .....	310
Shrewsbury		St. Joseph	
Mackenzie Creek near .....	304	Missouri River at .....	97
Smithfield		St. Louis	
Center Creek near .....	507	Mississippi River at .....	278
Smithville		St. Thomas	
Little Platte River at .....	104	Osage River below .....	216
Smithville Reservoir near .....	103	Stable isotope ratio, definition of .....	30
Smithville Reservoir near Smithville .....	103	Stage (see gage height) .....	30
Smokey Creek near Linneus .....	531	Stage-discharge relation, definition of ....	30
Sodium adsorption ratio, definition of .....	29	Station identification numbers .....	9
Soil heat flux, definition of .....	29	Station manuscript .....	11
Soil-water content, definition of .....	30	Statistics of monthly mean data .....	13
South Creek near Springfield .....	406	Steelville	
South Fabius River near Taylor .....	54	Huzzah Creek near .....	313
South Fork Little Dry Sac River		Meramec River near .....	312
near Springfield .....	190	Stockton	
South Fork Saline Creek near Perryville ....	364	Sac River at Highway J below .....	195
South Fork Salt River above Santa Fe .....	64	Stockton Lake near .....	194
South Grand River below Freeman .....	204	Stockton Lake near Stockton .....	194
near Clinton .....	208	Streamflow, definition of .....	30
Spanish Lake Trib near Black Jack .....	269	Substrate embeddedness class,	
Special networks and programs .....	8	definition of .....	30
Specific conductance, definition of .....	30	Substrate, artificial, definition of .....	19
Spencer Creek below Plum Creek		Substrate, definition of .....	30
near Frankford .....	73	Sugar Creek at Kirkwood .....	343
Spike samples, explanation of .....	18	Sullivan	
Spring Creek near Milan .....	531	Meramec River near .....	317
Spring River at Carthage .....	504	Summary of hydrologic conditions .....	4
near Waco .....	506	Summary statistics .....	13
Springfield		Sumner	
James River near .....	403	Grand River near .....	155
Pearson Creek near .....	398	Surface area, definition of .....	30
South Creek near .....	406	Surface water--streamflow .....	4
South Fork Little Dry Sac River near ...	190	Surficial bed material, definition of .....	30
Wilson Creek at .....	404	Suspended sediment, definition of .....	30
Wilson Creek near .....	405	Suspended solids, total residue at 105 °C	
Springs		concentration, definition of .....	31
Alley Spring		Suspended, definition of .....	30
at Alley .....	536	Recoverable, definition of .....	30
below Alley .....	477	Total, definition of .....	31
Big Spring near Van Buren .....	490	Suspended-sediment concentration,	
Blue Spring near Eminence .....	536	definition of .....	30
Burgermeister Spring		Suspended-sediment discharge,	
near Weldon Spring .....	79	definition of .....	31
Greer Spring at Greer .....	498	Suspended-sediment load, definition of ....	31
Maramec Spring near St. James .....	310	Swan	
Montauk Springs at Montauk .....	536	Swan Creek near .....	450
Pulltite Spring near Round Spring .....	536	Swan Creek near Swan .....	450
Roaring River Spring near Cassville ....	396	Synoptic studies, definition of .....	31
Roubidoux Spring at Waynesville .....	222		
Round Spring at Round Spring .....	536		
Welch Spring near Akers .....	536		
Squaw Creek near Mound City .....	92		
St. Charles			
Missouri River at .....	258		

## T

Table giving comparisons of 2002 7-day low flows to 7-day, 2-year low flows and minimum flows for the period of record for selected stations .....	7
--	---



Table giving comparisons of peak discharge for the 2002 water year with those for period of record for selected stations .	4	Ultraviolet (UV) absorbance (absorption), definition of .....	32
Table giving minimum and maximum daily mean suspended-sediment concentrations at two selected stations for the water year ...	7	Unconfined aquifer, definition of .....	33
Table giving range of dissolved-solids concentrations in selected streams during the water year .....	7	Union	
Table Rock Lake near Branson .....	439	Bourbeuse River above .....	321
Tables, list of .....	vi	Bourbeuse River at .....	323
Tabo Creek Basin, hydrologic records in ....	530	Unionville	
Tabo Creek near Higginsville .....	530	Locust Creek near .....	152
Tarkio		University City	
Little Tarkio Creek near .....	530	River des Peres near .....	282
Taum Sauk Creek near Lesterville .....	464	Upper Mississippi River Basin, hydrologic records in .....	46
Taxa (Species) richness, definition of .....	31	Upper Peavine Creek near Belle .....	534
Taxonomy, definition of .....	31	V	
Taylor		Valley Park	
South Fabius River near .....	54	Fishpot Creek at .....	338
Tecumseh		Grand Glaize Creek near .....	344
Bryant Creek near .....	458	Van Buren	
North Fork River near .....	453	Big Spring near .....	490
Tenmile Creek near Poplar Bluff .....	535	Current River at .....	489
Thalweg, definition of .....	31	Vertical datum, definition of .....	33
Thebes, IL		Volatile organic compounds, definition of .....	33
Mississippi River at .....	368	W	
Thermograph, definition of .....	31	Waco	
Thompson River at Trenton .....	144	Spring River near .....	506
near Mount Moriah .....	140	Walnut Creek near Novinger .....	531
Tiff City		Walnut Grove	
Buffalo Creek at .....	527	Little Sac River near .....	191
Elk River near .....	521	Walnut Shade	
Patterson Creek near .....	519	Bull Creek near .....	449
Time-weighted average, definition of .....	31	Wappapello	
Tons per acre-foot, definition of .....	31	St. Francis River at .....	386
Tons per day, definition of .....	31	Wappapello Lake at .....	384
Total coliform bacteria, definition of .....	32	Wappapello Lake at Wappapello .....	384
Total discharge, definition of .....	32	Warsaw	
Total length, definition of .....	32	Harry S. Truman Reservoir at .....	209
Total load, definition of .....	32	Osage River bl Harry S. Truman Dam at ...	210
Total organism count, definition of .....	32	Water Quality-Control Data .....	17
Total recoverable, definition of .....	32	Water quality--streamflow .....	7
Total sediment discharge, definition of ....	32	Water table, definition of .....	33
Total sediment load, definition of .....	32	Water temperature .....	15
Total, bottom material, definition of .....	32	Water year, definition of .....	33
Total, definition of .....	31	Water-table aquifer, definition of .....	33
Transect, definition of .....	32	Watkins Creek at Bellefontaine Neighbors ...	270
Trenton		Waverly	
Thompson River at .....	144	Missouri River at .....	133
Troublesome Creek near Ewing .....	52	Wayland	
near Lewistown .....	529	Fox River at .....	46
Troy		Waynesville	
Cuivre River near .....	74	Roubidoux Spring at .....	222
Turbidity, definition of .....	32	WDR, definition of .....	33
Turkey Creek near Joplin .....	512	Weighted average, definition of .....	33
Turnback Creek above Greenfield .....	189	Welch Spring near Akers .....	536
Two Rivers		Weldon River at Princeton .....	142
Jacks Fork ab L. Shawnee Creek ab .....	487	Weldon Spring	
Jacks Fork ab Powell Spring ab .....	485	Burgermeister Spring near .....	79
Jacks Fork above .....	483	Wellston	
Jacks Fork bl 3rd unnamed hollow ab ....	488	Engelholm Creek near .....	288
Shawnee Creek above .....	486	West Fork Black River at Centerville .....	459

Wet mass, definition of .....	33
Wet weight, definition of .....	33
White River	
below Table Rock Dam near Branson .....	440
near Branson .....	442
Williams Creek near Peerless Park .....	334
Wilson Creek at Springfield .....	404
near Battlefield .....	412
near Brookline .....	407
near Springfield .....	405
WSP, definition of .....	33
Wyaconda River above Canton .....	49
Wyaconda River Basin,	
hydrologic records in .....	49
Y	
Yarnell Creek at Fenton .....	348
Z	
Zalma	
Castor River at .....	365
Zooplankton, definition of .....	33

# CONVERSION FACTORS AND VERTICAL DATUM

Multiply	By	To obtain
<b>Length</b>		
inch (in.)	$2.54 \times 10^1$	millimeter
	$2.54 \times 10^{-2}$	meter
foot (ft)	$3.048 \times 10^{-1}$	meter
mile (mi)	$1.609 \times 10^0$	kilometer
<b>Area</b>		
acre	$4.047 \times 10^3$	square meter
	$4.047 \times 10^{-1}$	square hectometer
	$4.047 \times 10^{-3}$	square kilometer
square mile (mi <sup>2</sup> )	$2.590 \times 10^0$	square kilometer
<b>Volume</b>		
gallon (gal)	$3.785 \times 10^0$	liter
	$3.785 \times 10^0$	cubic decimeter
	$3.785 \times 10^{-3}$	cubic meter
million gallons (Mgal)	$3.785 \times 10^3$	cubic meter
	$3.785 \times 10^{-3}$	cubic hectometer
cubic foot (ft <sup>3</sup> )	$2.832 \times 10^1$	cubic decimeter
	$2.832 \times 10^{-2}$	cubic meter
cubic-foot-per-second day [(ft <sup>3</sup> /s) d]	$2.447 \times 10^3$	cubic meter
	$2.447 \times 10^{-3}$	cubic hectometer
acre-foot (acre-ft)	$1.233 \times 10^3$	cubic meter
	$1.233 \times 10^{-3}$	cubic hectometer
	$1.233 \times 10^{-6}$	cubic kilometer
<b>Flow</b>		
cubic foot per second (ft <sup>3</sup> /s)	$2.832 \times 10^1$	liter per second
	$2.832 \times 10^1$	cubic decimeter per second
	$2.832 \times 10^{-2}$	cubic meter per second
gallon per minute (gal/min)	$6.309 \times 10^{-2}$	liter per second
	$6.309 \times 10^{-2}$	cubic decimeter per second
	$6.309 \times 10^{-5}$	cubic meter per second
million gallons per day (Mgal/d)	$4.381 \times 10^1$	cubic decimeter per second
	$4.381 \times 10^{-2}$	cubic meter per second
<b>Mass</b>		
ton (short)	$9.072 \times 10^{-1}$	megagram or metric ton

Temperature in degrees Celsius (°C) may be converted to degrees Fahrenheit (°F) as follows:  
 $^{\circ}\text{F} = (1.8^{\circ}\text{C}) + 32$